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234

A SERIES OF TEXTBOOKS FOR PERSONS ENGAGED IN ENGINEERING PROFESSIONS, TRADES, AND VOCATIONAL OCCUPATIONS OR FOR THOSE WHO DESIRE INFORMATION CONCERNING THEM. FULLY ILLUSTRATED

ACCOUNTING METHODS OF BANKS OPERATING ON THE NEW YORK STOCK EXCHANGE

STOCK-BROKERAGE ACCOUNTING METHODS

ACCOUNTS FOR STEAM ROADS

ACCOUNTS FOR MINING COMPANIES

ACCOUNTS FOR INSURANCE COMPANIES

MUNICIPAL ACCOUNTING

GRAPHS

C. P. A. QUESTIONS AND ANSWERS

SCRANTON
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PREFACE

The volumes of the International Library of Technology are made up of Instruction Papers, or Sections, comprising the various courses of instruction for students of the International Correspondence Schools. The original manuscripts are prepared by persons thoroughly qualified both technically and by experience to write with authority, and in many cases they are regularly employed elsewhere in practical work as experts. The manuscripts are then carefully edited to make them suitable for correspondence instruction. The Instruction Papers are written clearly and in the simplest language possible, so as to make them readily understood by all students. Necessary technical expressions are clearly explained when introduced.

The great majority of our students wish to prepare themselves for advancement in their vocations or to qualify for more congenial occupations. Usually they are employed and able to devote only a few hours a day to study. Therefore every effort must be made to give them practical and accurate information in clear and concise form and to make this information include all of the essentials but none of the nonessentials. To make the text clear, illustrations are used freely. These illustrations are especially made by our own Illustrating Department in order to adapt them fully to the requirements of the text.

In the table of contents that immediately follows are given the titles of the Sections included in this volume, and under each title are listed the main topics discussed. At the end of the volume will be found a complete index, so that any subject treated can be quickly found.

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ACCOUNTING METHODS OF BANKS

METHOD OF WORK

INTRODUCTION

1. Bank bookkeeping, so called, consists principally of making records of transactions on separate forms, and the main part of the work, therefore, is bookkeeping only in a limited sense. The forms used differ considerably and the system followed varies, but the method in all banks is the same in principle. The work of a bank is divided among the different departments, the number of which vary according to the importance of the bank and the volume of business transacted. In treating of bank bookkeeping, therefore, it seems advisable to describe the work as it would be done in a bank of average size and with an organization such as is found in one of the smaller cities of the country.

2. For the purpose of description, we have assumed that the bank under consideration is located in Hartford, Connecticut, and that it is named the Equitable National Bank. It has a capital stock of $500,000 and a surplus of $200,000 and does an ordinary commercial business. Its principal officers are M. A. Bigelow, president, and J. E. Allard, cashier. It is a member of the Hartford Clearing House Association and its clearing house number is 6. The following is a list of the names and numbers of all the Hartford banks belonging to the Clearing House Association: (1) Hartford National

Bank, (2) Farmers and Mechanics National Bank, (3) National Exchange Bank, (4) State Bank, (5) First National Bank, (6) Equitable National Bank.

The Hartford banks not members of the Clearing House Association are: Merchants Bank, Security Trust Company.

The principal correspondents of the Equitable National Bank are the Eastern National Bank of New York and the First National Bank of Boston.

3. The work of the bank is divided among seven departments, which are: (1) Receiving teller, (2) paying teller, (3) collection clerk, (4) note, or discount, clerk, (5) proof-book clerk, (6) individual-ledger bookkeeper, (7) general-ledger bookkeeper. This division of the work represents merely what is considered to be convenient in carrying on the work of this particular bank. The employes of the bank rank, according to the importance of their positions, as follows: Paying teller, receiving teller, discount clerk, general-ledger bookkeeper, individual-ledger bookkeeper, collection clerk, proof-book clerk.

4. In the work of the bank all checks and other items payable at banks that are members of the Hartford Clearing House Association are classed as clearings. Items payable at banks not members of the Association are classed as non-clearings.

Each non-member of the clearing house carries an account with a bank that is a member, and this bank clears for such depositor bank all its checks drawn on clearing-house members.

Special arrangements are made by the Clearing House Association to clear each afternoon at a given time items drawn on banks in near-by towns, known as foreign clearing-house banks. By this arrangement all items drawn on the banks in one place are sent direct to a town in one letter. Items drawn on banks in distant places are sent to the correspondent banks in New York or Boston.

BOOKKEEPING SYSTEM

5. The bookkeeping system followed here is known as the loose-leaf strike-sheet system. By this system the records of the receiving teller, paying teller, note teller, and collection clerk are made on individual sheets designated as **strike sheets,** and the work of each one can be proved by itself and also by the figures in the proof book.

All items and checks from the different departments are sent to one place, where they are entered in what is called the

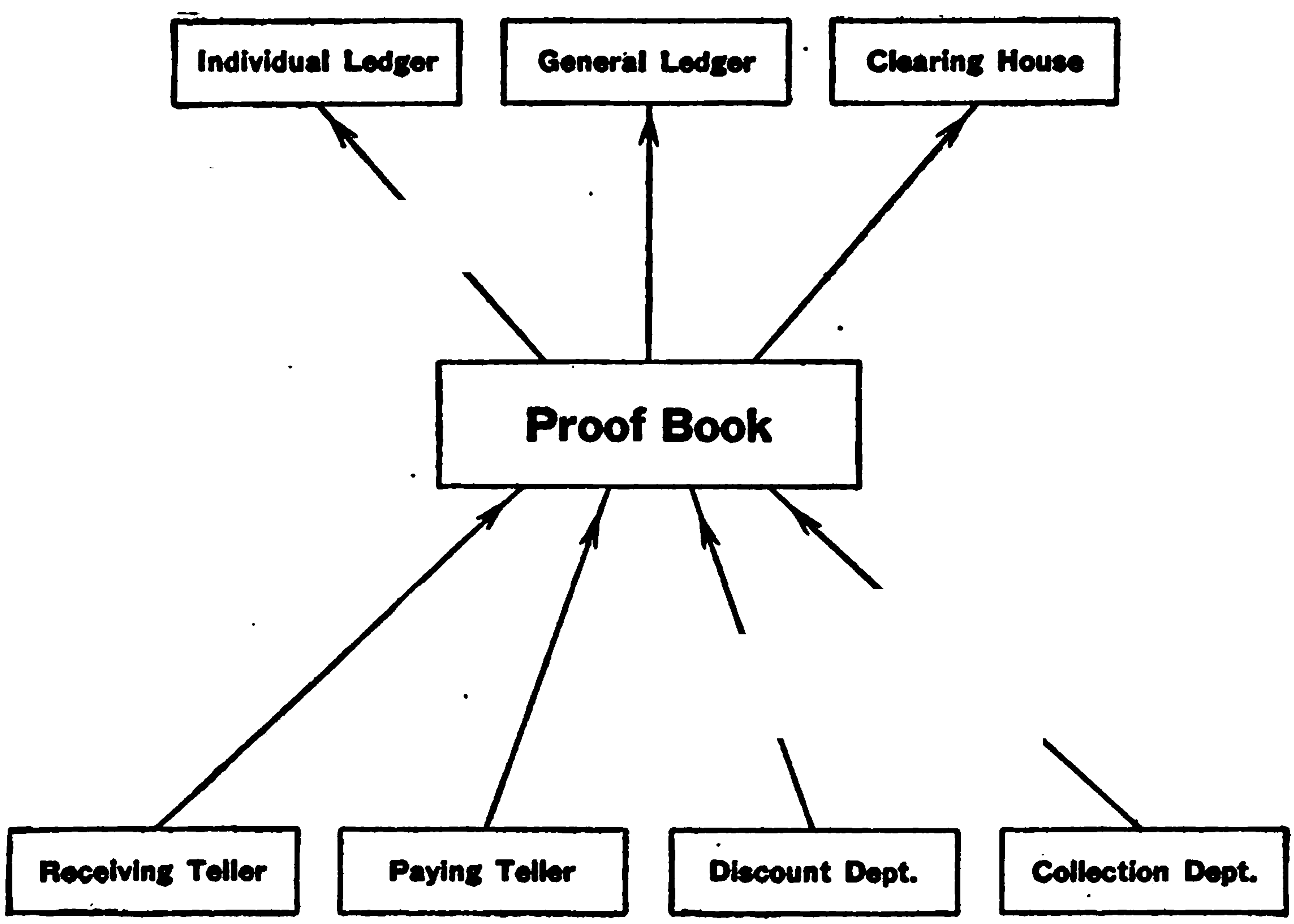


FIG. 1

proof book under headings for each department. As an equal debit or credit is made for each item received, the general strike of the total amount and the amounts of the different departments should agree.

When a strike, or proof, is made of the work and it is found that the debit and credit sides of the proof book agree, the items are distributed to the individual-ledger bookkeeper, general-ledger bookkeeper, local and foreign clearing houses, and the correspondent clerk. The total of the items posted by

the bookkeepers must agree with the figures shown by the proof book.

The day's work of a bank is balanced when the total amounts of all the different departments agree with the figures shown by the proof book and the debit and credit sides of the proof book agree.

6. The relation of the departments of a bank to each other will be seen by a reference to the chart shown in Fig. 1. It will be seen from this that the proof-book department is the central point in bank work, as all items go to this department on their way to the ledgers and the clearing house. Of the total amount taken in by a bank, about one-half is handled by the receiving teller, one-fourth by the paying teller, and one-eighth each by the discount and collection tellers. As already stated, all transactions are sent to the proof-book department and are distributed from there in about equal amounts to the individual ledger, the general ledger, and the clearing house.

RECEIVING TELLER

7. The receiving teller ranks in importance after the paying teller. It is his duty to receive the deposits of customers and to enter the amount and the date in the pass book of each one.

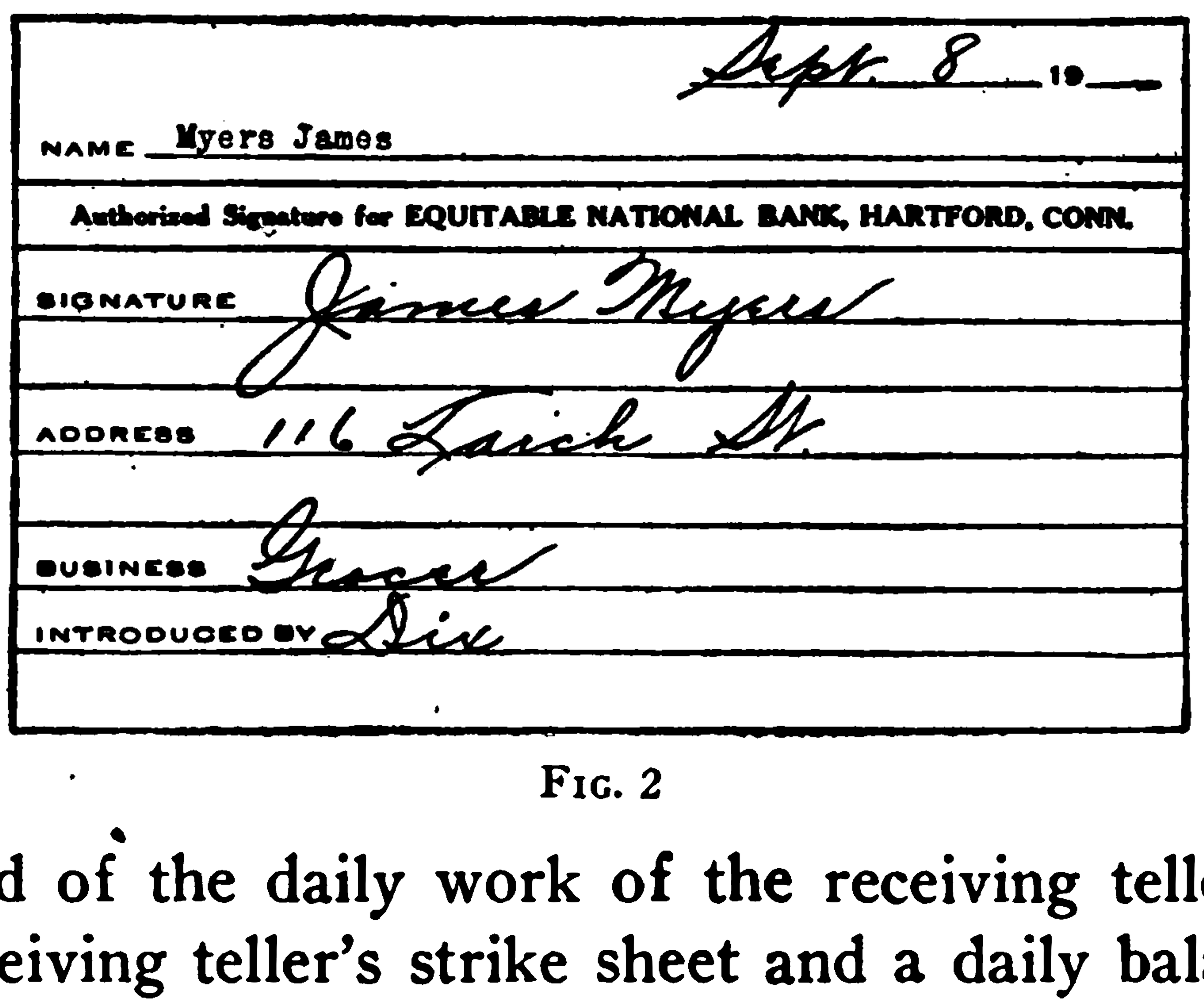

Sept. 8 19
NAME Myers James
Authorized Signature for EQUITABLE NATIONAL BANK, HARTFORD, CONN.
SIGNATURE James Myers
ADDRESS 116 Larch St.
BUSINESS Grocer
INTRODUCED BY Dix

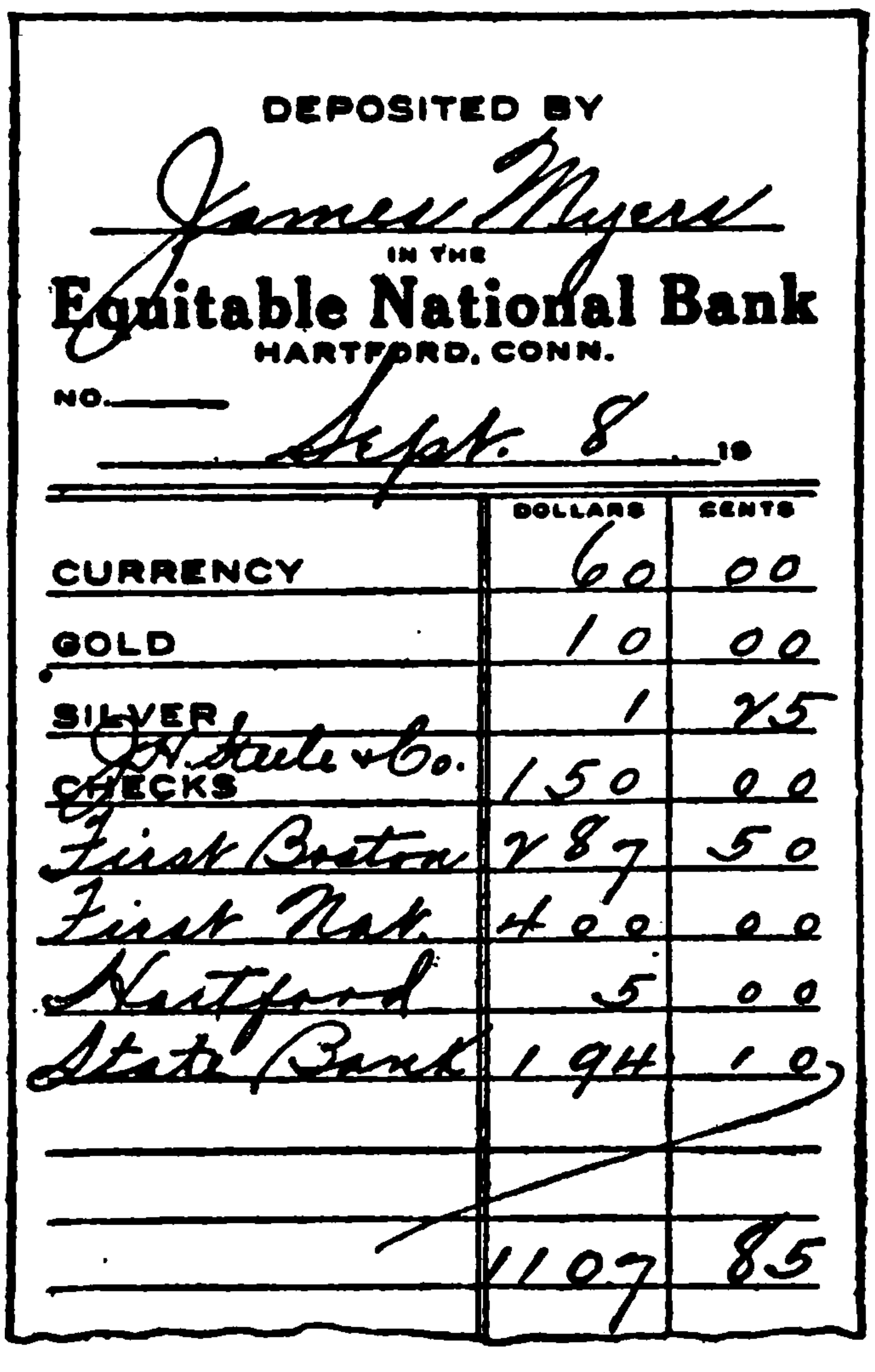
FIG. 2

The record of the daily work of the receiving teller is made on the receiving teller's strike sheet and a daily balance sheet. These sheets are dated and filed after the day's work is balanced.

8. The transactions of the receiving teller involve the use of the following forms:

On opening an account at a bank, each customer is required to fill out a **signature card** similar to the one shown in Fig. 2. The customer writes his name on this card in exactly the same way it will be signed on checks, gives his home or business address, the nature of his business, and the name of the person by whom he was introduced to the bank. If the depositor is a firm or corporation, the card shows the names of the partners or those of the corporation officers authorized to sign checks. After the card is filled out, the date the account was opened, and the name of the customer is typewritten at the top by the bank, and the card is then filed alphabetically in a case located conveniently for the tellers and bookkeepers to compare signatures on checks.

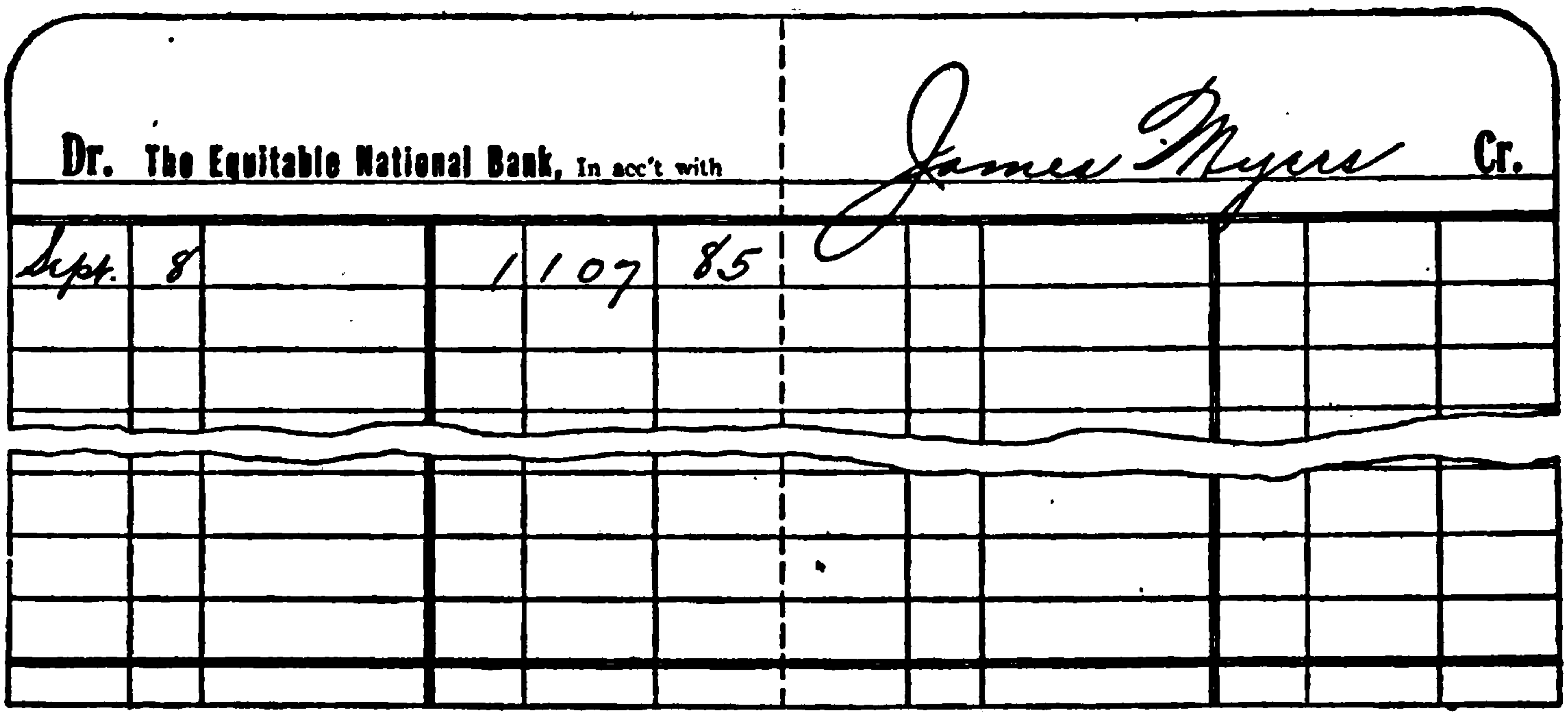
9. Deposit tickets, the form of which is shown in Fig. 3, are furnished for the use of depositors, who are expected to make them out. This saves the time of the teller but it has a greater advantage of facilitating a checking of the items by him. In making out a deposit ticket, the depositor writes the date and his name in the spaces at the top and lists the items of a deposit in the lines below. Currency, gold, silver, and checks are listed separately as shown. Checks drawn on the bank where the deposit is made are usually designated by the name of the drawer, those drawn on other local banks by the name of the bank, and those drawn on out-of-town banks by the name of the bank and the city or town and state in which it is located or more frequently only by the name of the city or town.


DEPOSITED BY
James Myers
IN THE
Equitable National Bank
HARTFORD, CONN.
NO.—— Sept. 8 19

	DOLLARS	CENTS
CURRENCY	60	00
GOLD	10	00
SILVER	1	25
CHECKS N. Steele & Co.	150	00
First Boston	287	50
First Nat.	400	00
Hartford	5	00
State Bank	194	10
	1107	85

FIG. 3

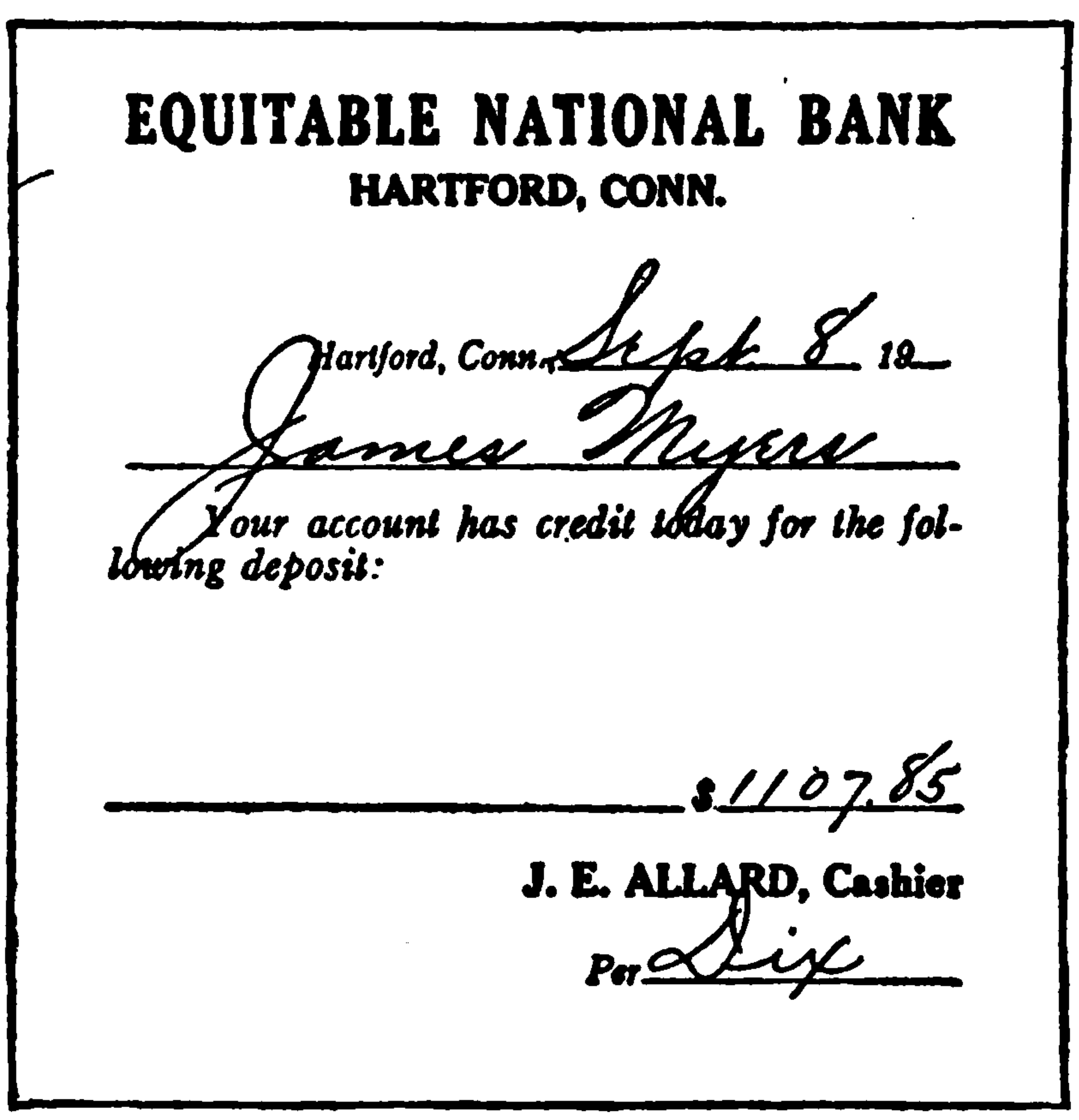
When a deposit is received, the teller verifies the items by counting the cash and comparing the amounts on the checks


Dr. The Equitable National Bank, In acc't with James Myers Cr.

Sept.	8		1	107	85

FIG. 4

with the amounts listed on the deposit slip. Each check must be examined carefully to see that it is made out in proper form —that is, that it is dated, that the amount given in figures and in words agree, that it is signed by a responsible person, and that it is properly indorsed. If the amount of a check is not expressed the same in figures and in words, the amount written in words is taken as correct. After the items of the deposit slip are checked, the column of figures is added and the total entered in the depositor's pass book.


EQUITABLE NATIONAL BANK
HARTFORD, CONN.

Hartford, Conn., Sept. 8 19

James Myers

Your account has credit today for the following deposit:

$1107.85

J. E. ALLARD, Cashier
Per Dix

FIG. 5

10. A **pass book,** the form of which is shown in Fig. 4, is a book furnished to each depositor when his account is opened. It serves as a receipt book and is presented each time a deposit is made. In making an entry, the date of the deposit is given on the left-hand side of the page and the amount on the right-hand side. Proceeds of discounts and collections are entered from

credit slips made out by the note or collection clerk, in which case the initials of the clerk who made out the slip are entered in the column between the date and the amount columns.

If the pass book is not presented with a deposit, the receiving teller makes out a credit slip similar to that shown in Fig. 5.

11. The receiving teller's **strike sheet** is of the form shown in Fig. 6. Only the cash transactions of the teller are shown on the sheet, the total amount of currency, gold, and

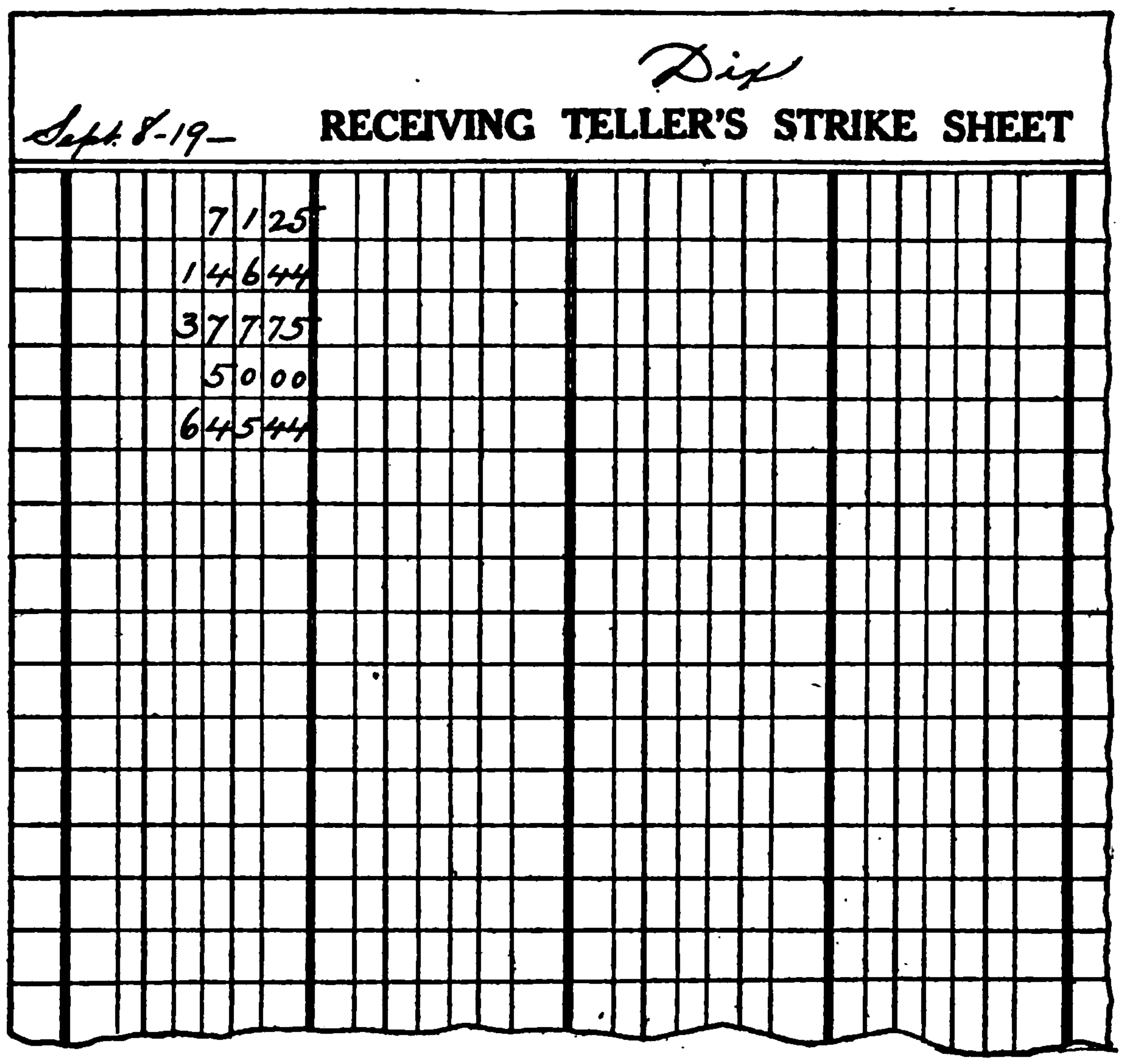


Fig. 6

silver of each deposit being entered as one item. Checks listed on deposit slips are not considered as cash and are not entered on the sheet, being disregarded in balancing the daily work of the receiving teller. When more than one receiving teller is employed, the work of each is distinguished by a pencil of a certain color. After the cash part of a deposit is recorded on the teller's sheet, the deposit slip and checks are sent to the proof-book department. At the close of the day's work the receiving teller's sheet is footed, the total showing the amount received during the day.

RECEIVING TELLER'S DAILY BALANCE

NICKEL			SILVER			GOLD			BILLS						
		09		11	00		10	00		24		Notes	1	536	
		60		22	25		20	00		12		Gold		50	
				25	50		20	00		110		Silver		58	75
		69								190		Nickel			69
				58	75		50	00		100		Cash on hand	1	645	44
										100		Held over from yesterday	1	000	00
									1	000		Day's receipts		645	44
												Add amount deducted	1	000	00
									1	536	00	Total	1	645	44
												To paying teller	1	500	00
												Carried over for next day		145	44

Fig. 7

12. The receiving teller's daily **balance sheet,** shown in Fig. 7, is a form used for recording the amount of cash in the hands of the teller at the close of the day's business. The various denominations are counted and the amount of each entered in the column under the proper heading. In the column headed Nickel is entered the amount in pennies and under it the amount in five-cent pieces. In the Silver column are entered in order, one under the other, the amounts in ten-cent pieces, twenty-five cent pieces, and fifty-cent pieces, and finally the amount in silver dollars. In the Gold column are entered the amounts in the various denominations of gold coins; and in the Bills column are entered the amounts of each of the various denominations of bills. After the cash is thus listed, the columns are totaled and the totals carried to the recapitulation column on the right-hand side of the sheet. The total of this column shows the actual amount on hand, but in order to compare this with the total of the teller's strike sheet, Fig. 6, the amount brought over from the previous day's business must be deducted. As shown in Fig. 7, the amount was $1,000, and the balance agrees with the amount in Fig. 6. The $1,000 is again added to give the amount on hand, and from this sum is deducted any amount turned over to the paying teller, which leaves the amount to be carried over to the next day's business.

TRANSACTIONS

13. The following were the transactions at the receiving teller's window on Tuesday, September 8, 19—:

Deposit of new customer:	
James Myers,	
Bills	$ 60.00
Coin	11.25
Checks	
J. H. Steele & Co.	150.00
First, Boston	287.50
First National	400.00
Hartford	5.00
Springfield, Mass.	194.10
	$1,107.85

Deposits of regular customers:

W. H. Gillette & Co.,	
Bills	$ 106.44
Gold	40.00
Checks	
Farmers & Mechanics	984.90
Chattanooga	1,564.00
Merchants	10.00
	$2,705.34
F. T. Peabody,	
Bills	$ 320.00
Coin	57.75
Checks	
W. H. Gillette & Co.	400.00
James Myers	158.80
National Exchange	631.00
Security Trust	1,040.61
	$2,608.16
Lucy B. Fostelle,	
Bills	$ 50.00
Checks	
First National	10.00
National Exchange	42.00
F. T. Peabody	30.00
	$ 132.00

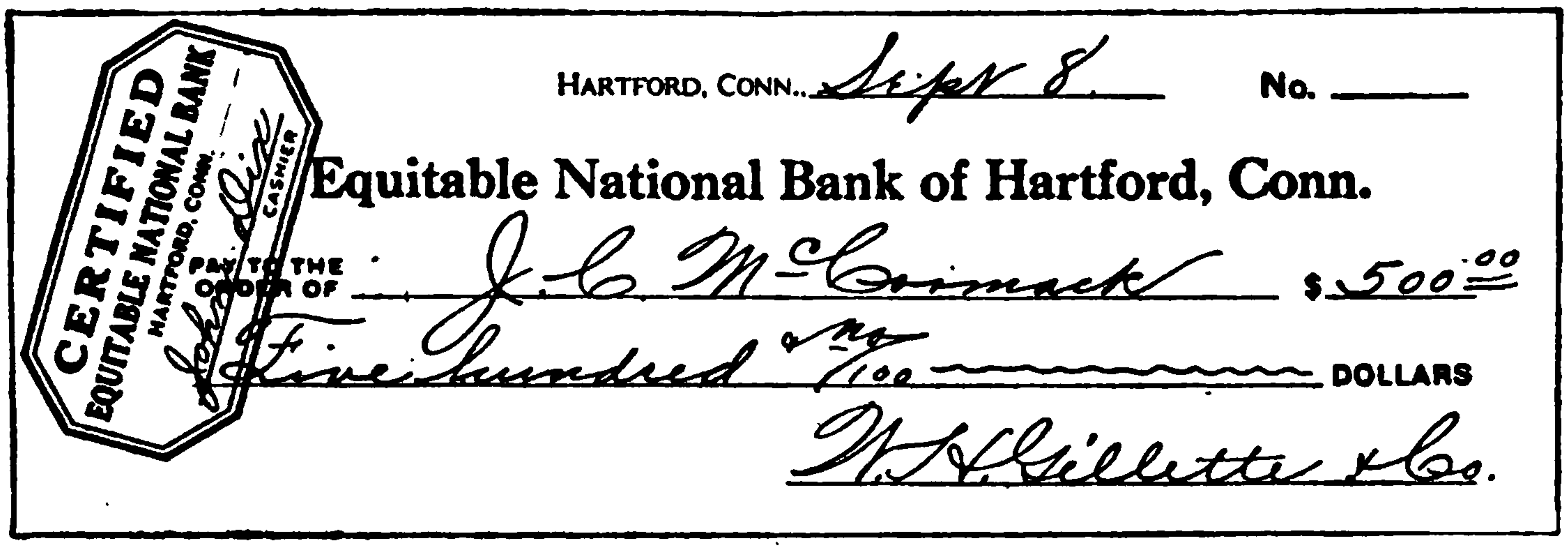
Cash on hand in detail at the close of business:

Gold coin	$ 50.00
Bank notes	1,536.00
Fractional silver	58.75
Nickels and cents	.69
	$1,645.44

PAYING TELLER

14. The paying teller of a bank ranks in importance next to the officials. He has charge of the bank's money, and it is his duty to cash checks and make all other payments called for by the business of the bank, including the settlement of the clearing-house balances. It is necessary for the paying teller to be in close touch with the accounts of depositors and he must be thoroughly familiar with their signatures.

15. Payment on account of a depositor is usually made on presentation of an order, known as a **check**, the form of which


CERTIFIED
EQUITABLE NATIONAL BANK
HARTFORD, CONN.
CASHIER

HARTFORD, CONN. Sept 8 No. ______

Equitable National Bank of Hartford, Conn.

PAY TO THE ORDER OF J. C. McCormack $500.00

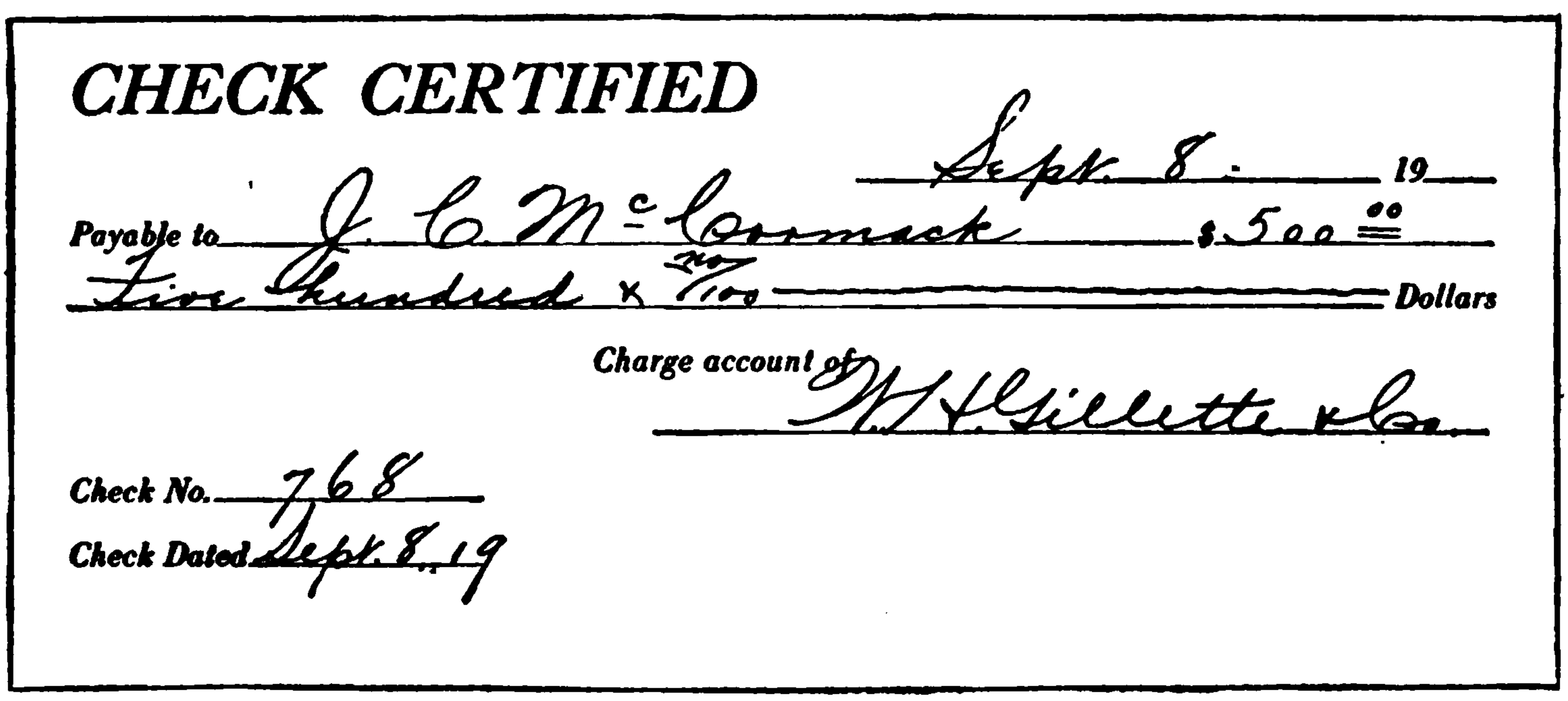
Five hundred & no/100 DOLLARS

W. H. Gillette & Co.

Fig. 8

is shown in Fig. 8. When a check of a depositor is presented for payment it is carefully scrutinized by the paying teller to see that it is in proper form—that is, that it is dated, that the amount as expressed in figures and in words is the same, that the signature is genuine, that the check is properly indorsed, and that the amount on deposit is sufficient to meet it. When a check drawn on another bank is presented and the teller does not know whether the indorser is financially responsible, he usually calls by telephone the bank on which the check is drawn to find out whether it is good.

16. Checks of depositors are often presented to be certified, which is a guarantee by the bank that it will be paid on presen-


CHECK CERTIFIED

Sept. 8. 19__

Payable to J. C. McCormack $500.00

Five hundred & no/100 *Dollars*

Charge account of W. H. Gillette & Co.

Check No. 768

Check Dated Sept. 8. 19

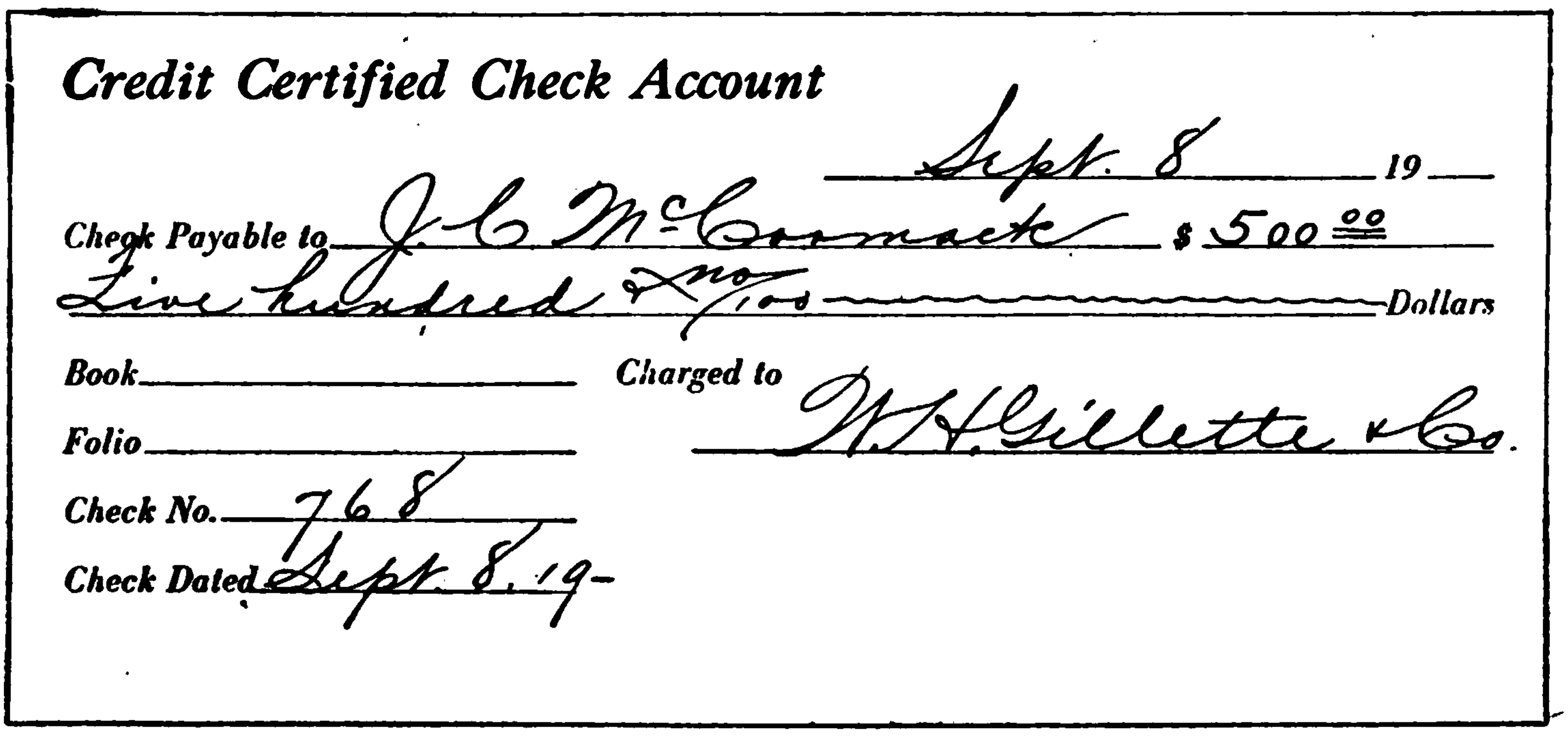
Fig. 9

tation. A check is **certified** by stamping on its face, usually in red ink, the word "Certified" and the date, the certification

being signed by the paying teller or the cashier. The form of certification is illustrated on the check shown in Fig. 8.

The certification of a check makes the bank responsible for its payment instead of the drawer. Therefore, on certifying a check, which must first be O.K.'d by the bookkeeper, the paying teller makes out a charge slip, Fig. 9, from which to charge the customer's account with the amount, and a credit certified-check slip, Fig. 10, from which to credit the certified-check account in the general ledger.

17. When the teller pays a check, he stamps on its face the date of payment to show a cash transaction and makes the proper entry on his strike sheet, which contains a record of all



Credit Certified Check Account

Sept. 8 19—

Check Payable to J. C. McCormack $500.00

Five hundred & no/100 Dollars

Book______ Charged to W. H. Gillette & Co.

Folio______

Check No. 768

Check Dated Sept. 8, 19-

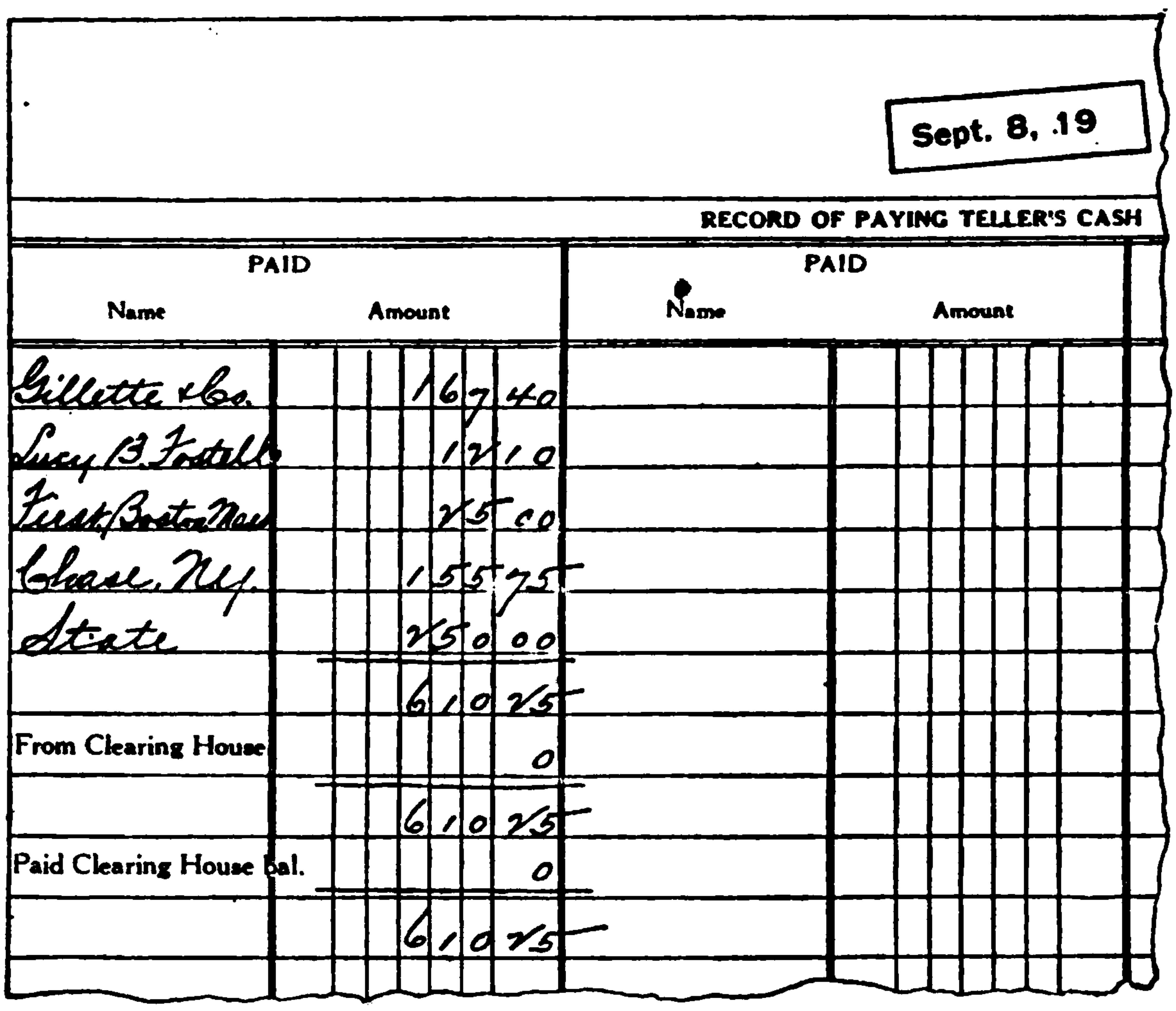
FIG. 10

payments made by him and is of the form shown in Fig. 11. If the check is drawn on the bank at which it is presented, the name of the maker is entered in the first column under the heading Name, and the amount is entered in the next column. If the check is drawn on another bank in the same or some other city or town, the name of the bank and the city or town and state is written in the first column instead of the name of the maker. Certificates of deposit, when paid, are treated as checks.

At the close of the day's business, or oftener if desirable, the teller makes an adding-machine list of the items in the order in which the transactions occurred, notes the total amount on the back of the last check of each lot, and delivers the lot

to the proof-book clerk. The items are then entered in the proof book and the column is footed. If the amount agrees with the total as given by the teller, the items are distributed to the proper accounts.

18. At the close of the day's business the paying teller makes out a **daily balance sheet** of a form shown in Fig. 12, similar to that of the receiving teller. This sheet shows the amount on hand in the different denominations of currency. In the column at the left under the heading of Bills is



Sept. 8, 19

RECORD OF PAYING TELLER'S CASH

PAID Name	Amount	PAID Name	Amount
Gillette & Co.	167 40		
Lucy B. Foster	12 10		
First Boston Mass	25 00		
Chase, N.Y.	155 75		
State	250 00		
	610 25		
From Clearing House	0		
	610 25		
Paid Clearing House bal.	0		
	610 25		

Fig. 11

listed, first, the amount in twenty-dollar bills; second, the amount in ten-dollar bills; third, the amount in five-dollar bills; fourth, the amount in two-dollar bills; fifth, the amount in one-dollar bills; sixth, the amount in bills of large denominations; and seventh, the amount in strapped bills, if any. In the second column is listed the amounts in the several denominations of gold coins, beginning with the highest in value. In the third column is listed the amounts in the various denominations of silver coins; and in the fourth column, the amounts in nickels and pennies. The fifth column, which is headed Items, is for listing late checks—that is, checks presented by

PAYING TELLER'S DAILY BALANCE

BILLS	GOLD	SILVER	NICKELS	ITEMS	TOTAL
16000	4000	500	400		85000
10000	3000	1500	100		10000
5000	2000	2000			4500
1000	1000	500			500
3000					
50000					
85000	10000	4500	500		100000
				Amount carried from previous day	161025
				Checks paid during day	61025
				Cash balance on hand	100000
				Received from receiving teller	150000
					250000

Fig. 12

customers after the regular banking hours, which may be paid as a special accommodation. Such items are considered as cash.

When all the cash is counted and the amounts are entered in the proper columns, the columns are footed and the totals

1m 7-21

Payment stopped on Note / Check of ____________________

Payable to ____________________

To the Equitable National Bank

Dear Sirs

Please stop payment on Note / Check No. ________ for $ ________

dated ________ payable to ____________________

signed as follows ____________________

The undersigned hereby agrees to reimburse you for all damages, cost and expense, to which you may be subjected by reason of refusal to honor said check and to furnish due and sufficient security therefor whenever demanded.

Date ____________ ____________________

FIG. 13

carried to the column headed Total on the right-hand side of the sheet, and the footing of this column shows the total amount of cash on hand. In the first line of the Total column below the horizontal double-ruled line is entered the amount

Reasons for stopping Payment: ____________________

____

Has duplicate been issued and when? ____________________

Revoked ____________________

FIG. 14

carried over from the previous day, as shown by the balance sheet for that day, and from this amount is deducted the amount paid out during the day, the balance showing the cash on hand. This balance, if no mistake has been made, will agree

with the total of the cash on hand shown above. To this balance must be added the amount turned over by the receiving

Stop Payment On CHECK / NOTE

of ______ for $ ______

payable to ______ No. ______

signed ______ dated ______

Reason ______

FIG. 15

teller, and the total shows the amount carried over for the next day's business.

19. During the course of the day's business it may be necessary for the paying teller to handle several other forms described following:

WILL REQUIRE THE FOLLOWING ASSORTMENT OF CURRENCY ON

______ 19__

Twenties			
Tens			
Fives			
Twos			
Ones			
Silver Dollars			
Halves			
Quarters			
Dimes			
Nickels			
Cents			
TOTAL			

To avoid delay, whenever possible send this list in the day before the currency is required.

EQUITABLE NATIONAL BANK
HARTFORD, CONN.

FIG. 16

In Fig. 13 is shown a card used when payment on a note or check is to be stopped. If payment on a check is to be stopped, the matter is referred to the paying teller, who crosses out the word Note and fills out the card or asks the customer to do so, and the customer signs it. The back of the card is shown in Fig. 14. This side is signed by the customer if the stop-payment order is revoked.

Stop-payment cards are filed alphabetically in a case located conveniently for the tellers and bookkeepers, and a stop-payment slip of the form shown in Fig. 15 is posted or filed in the cages of the tellers as a reminder to be on the lookout for the presentation of the check.

20. A form of requisition furnished free by banks to customers is shown in Fig. 16. The customer specifies on this form the denominations of currency required for pay rolls and presents it with his check for the total amount. This requisition is usually handed to the paying teller the day before the cash is required, in order to give him time to put it up without interfering with other transactions.

TRANSACTIONS

21. The following were the transactions at the paying teller's window on Tuesday, September 8, 19—:

Checks paid:	
W. H. Gillette & Co., on Equitable	$167.40
Lucy B. Fostelle, on Equitable	12.10
First National Bank, Boston	25.00
Chase National Bank, New York	155.75
State Bank, City	250.00
Certified the following check:	
W. H. Gillette & Co. to J. C. McCormack	$500.00
Received $500 in currency from the receiving teller.	
Cash on hand from yesterday, $1,610.25.	
Detailed statement of cash on hand at the close of business:	
Bills	$ 850.00
Gold coin	100.00
Silver	45.00
Nickels and cents	5.00
	$1,000.00

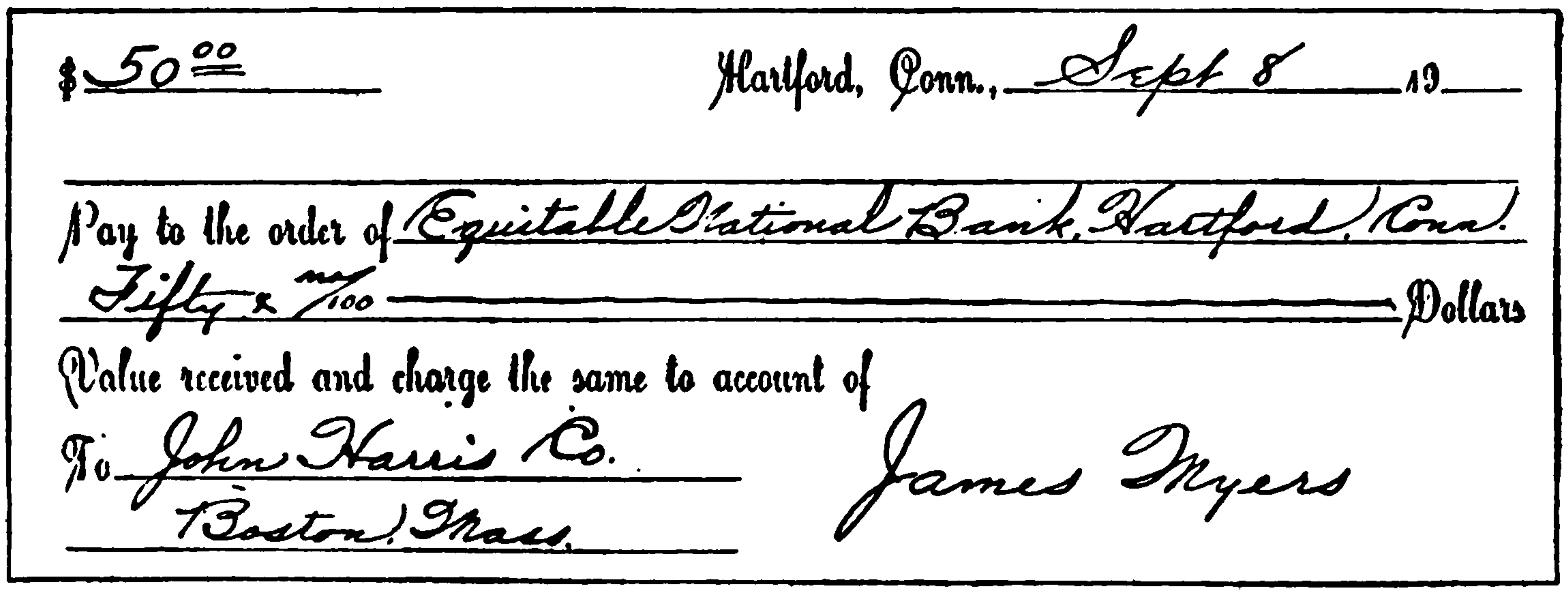
COLLECTION DEPARTMENT

22. The collection clerk ranks in importance next to the last of the bank clerks. It is his duty to take charge of the drafts and other items received by the bank for collection and to make the collections at the proper times.

A **draft** is an order generally made by one person on his funds in the hands of another person. It may, however, be drawn when the drawer has no funds in the hands of the drawee if he has reason to suppose that it will be honored. A draft may be drawn on demand, at sight, or on time. Drafts

drawn at sight and on time are shown in Figs. 17 and 18. Acceptance of a draft makes the acceptor liable for its payment on the due date.

23. When a draft is received by a bank for collection from one of its customers, he is notified of it on a form similar to


$50.00 Hartford, Conn., Sept 8 19__

Pay to the order of Equitable National Bank, Hartford, Conn.

Fifty & no/100 Dollars

Value received and charge the same to account of

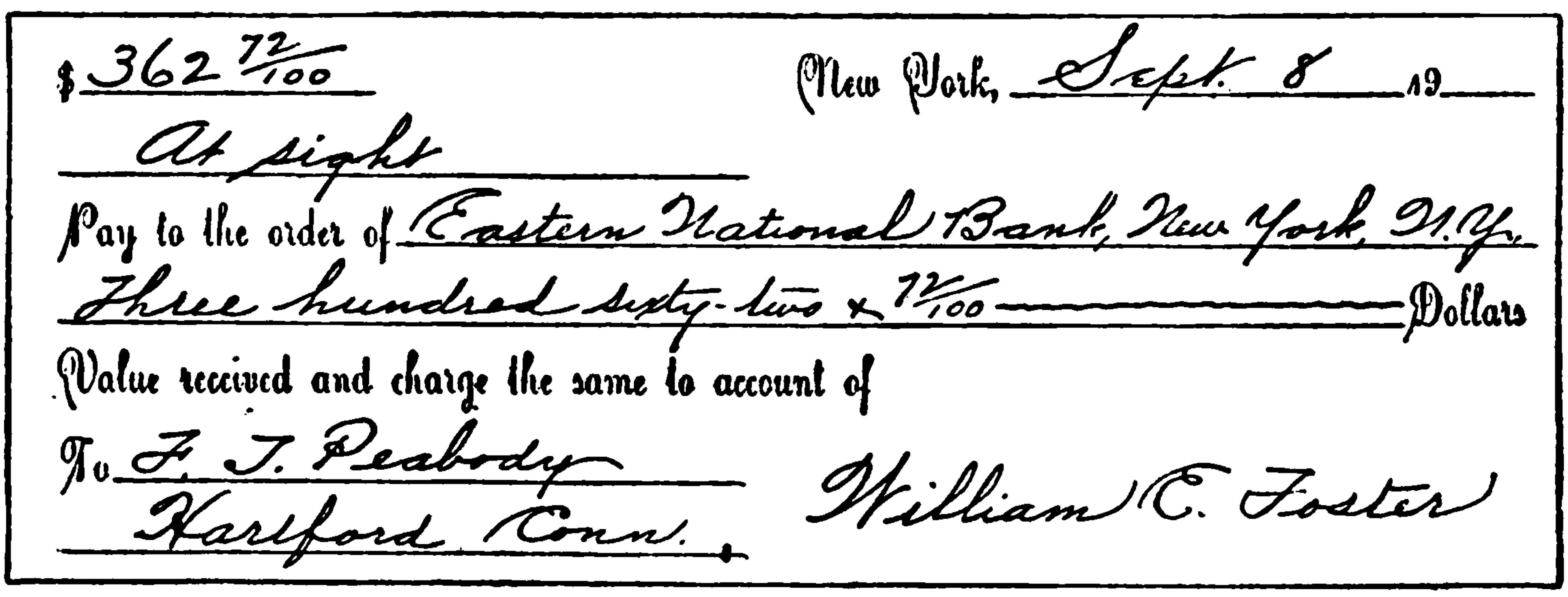
To John Harris Co.
Boston, Mass.

James Myers

FIG. 17

the one shown in Fig. 19. If a bill of lading is attached to the draft, a notice of the form shown in Fig. 20 is sent.

24. As items are received for collection they are entered in a book known as the **collection register**, the form of which is shown in Fig. 21. The illustration shows what information is recorded, so that no explanation is necessary except to state that the entry in the last column headed Disposition is not


$362 72/100 New York, Sept 8 19__

At sight

Pay to the order of Eastern National Bank, New York, N.Y.

Three hundred sixty-two & 72/100 Dollars

Value received and charge the same to account of

To F. T. Peabody
Hartford, Conn.

William E. Foster

FIG. 18

made until after the item has been presented for payment. In this case it is assumed that F. T. Peabody has paid the amount by check before the presentation of the draft and that the draft was returned the same day unpaid. Accordingly the entry in the column headed Disposition will be as shown.

When a draft or other item is returned unpaid to the sender, the reason for non-payment is attached to it and a letter of advice of the form shown in Fig. 22 accompanies it.

25. In banks that handle a great number of collection items on out-of-town banks for customers, the following system is

Please reply at once

MAKE ALL CHECKS PAYABLE TO ORDER OF

Equitable National Bank, Hartford, Conn.

HARTFORD, CONN. Sept. 8 '19.

MR. F. J. Peabody

Please call and {pay / accept} a draft drawn on you at —— days (sight ————)

by William E. Foster

$ 367.72 EQUITABLE NATIONAL BANK

Kindly Bring this Notice With You

FIG. 19

used: As items are received, they are entered on a collection register made up of five sheets of paper of different colors and bound together at the top. The first, or front, sheet contains five divisions like that shown in Fig. 23 and is not perforated

All Drafts are Payable in Money or Certified Checks to the order of

Equitable National Bank, Hartford, Conn.

HARTFORD, CONN.,________________19____

$__________

MR.______________________________

Please call, ON ARRIVAL OF GOODS, and pay a draft, with Bill of Lading attached for

Car No.__________drawn on you by______________________

If payment is refused on arrival of goods, kindly notify us, stating the reason.

EQUITABLE NATIONAL BANK

FIG. 20

between the divisions. The sheets underneath contain similar divisions and are perforated so that each division can be readily detached.

When an entry is to be made, the set of sheets, with carbons between, is put into a typewriter, and the five copies of the

EQUITABLE NATIONAL BANK

COLLECTION REGISTER

RECEIVED	OUR NO.	PAYER	PAYABLE AT	COLLECTED FOR	SENDER'S NO.	DATE	TIME	DUE	AMOUNT	PROTEST	DISPOSITION
'15 Sept. 9	1671	F. L. Peabody	Hartford, Conn.	Eastern Nat'l, N.Y.	654	Sept 9	Sight	Sight	36 27	No	Returned Sept 18

FIG. 21

entry are produced at one writing, the entry being the same on all, though the printed forms on the different sheets vary

EQUITABLE NATIONAL BANK

Hartford, Conn., ____________ *19*___

We return the following unpaid items Reasons for non-payment accompanies each item.

Yours respectfully,
J. E. ALLARD, Cashier

YOUR LETTER DATE OR NUMBER	ON WHOM DRAWN	AMOUNT		

FIG. 22

slightly. The first entry is made on the bottom division of the register, and the front, or first, sheet constitutes the permanent record, the entry "Credited" or "Returned" being made when the item is finally disposed of. The copy on the second sheet, shown in Fig. 24, is filed to be used as a deposit slip to credit the customer's account when the amount has been received. The copy on the third sheet, shown in Fig. 25, is

Sept 8 19 **EQUITABLE NATIONAL BANK** No.
HARTFORD, CONN.
$50.00

James Myers — Customer
Sept 8 — Date or No.
No Protest
John Harris Co. — Drawee or Payer
Boston — Payable at
Sept 18 — Due

Sent to: First - Boston

CREDITED __________
RETURNED __________

FIG. 23

filed to be sent as a letter of advice to the customer when his account is credited. The copy on the fourth sheet, shown in

______ 19 **EQUITABLE NATIONAL BANK** No.
HARTFORD, CONN.

CREDIT $

______ Customer ______ Date or No. ______ *Protest*

______ Drawee or Payer ______ Payable at ______ Due

Sent to: *Date Credited:*

______

FIG. 24

______ 19 **EQUITABLE NATIONAL BANK** No.
HARTFORD, CONN.

$

______ Customer ______ Date or No. ______ *Protest*

______ Drawee or Payer ______ Payable at ______ Due

______

YOUR ACCOUNT HAS BEEN CREDITED TODAY WITH THE ABOVE DESCRIBED COLLECTION

FIG. 25

______ 19 **EQUITABLE NATIONAL BANK** No.
HARTFORD, CONN.

$

______ Customer ______ Date or No. ______ *Protest*

______ Drawee or Payer ______ Payable at ______ Due

To:

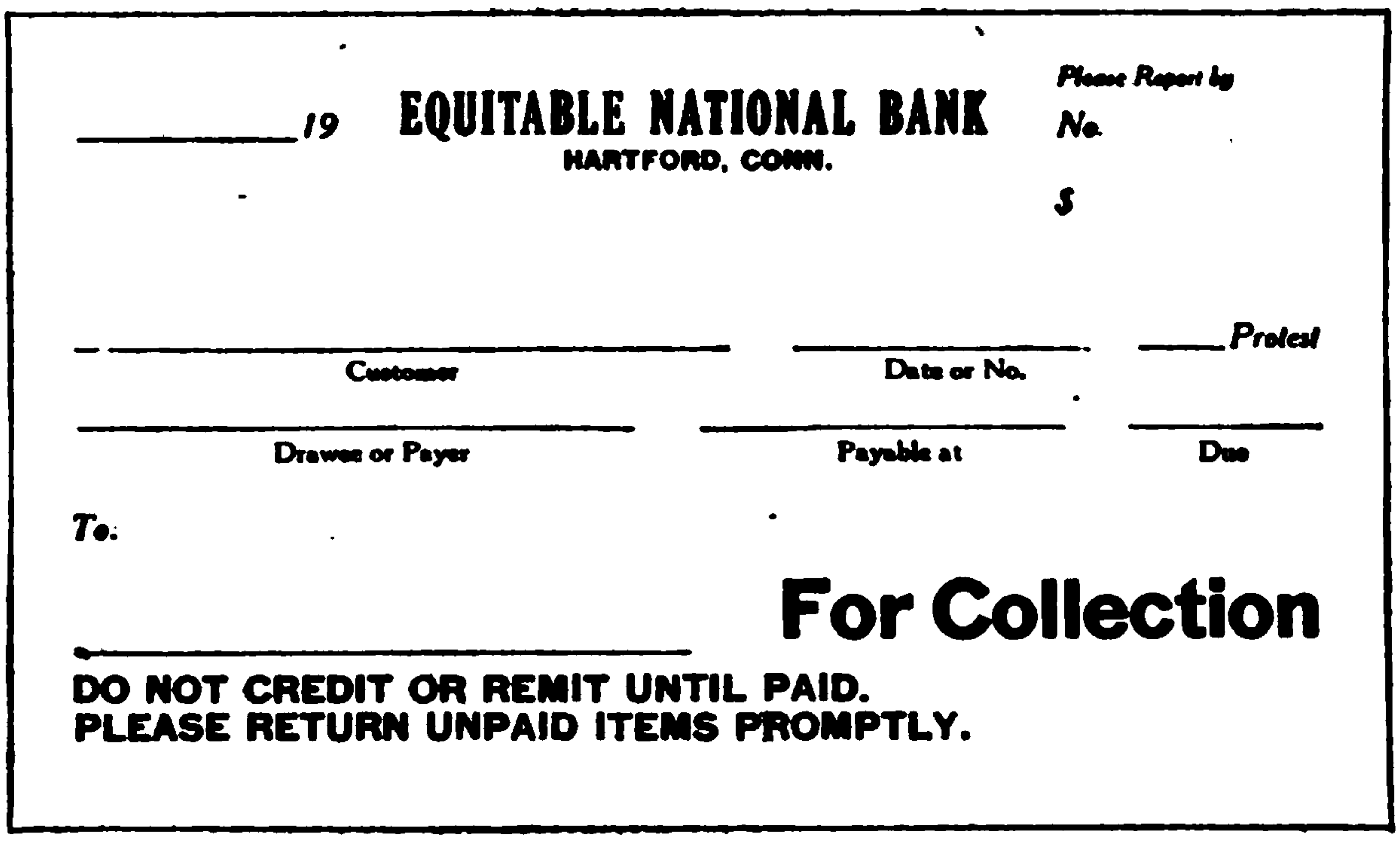
______ **TICKLER**

FILE UNDER DUE DATE.

FIG. 26

Fig. 26, is the tickler copy, which is filed under the due date of the item. The copy on the fifth sheet, shown in Fig. 27, is sent as a letter of advice to the bank to which the draft is sent.

The four under sheets, being perforated, can be detached as



______ 19 EQUITABLE NATIONAL BANK
HARTFORD, CONN.

Please Report by
No.
$

______ Protest

Customer | Date or No. | Due
Drawee or Payer | Payable at |

To:

For Collection

DO NOT CREDIT OR REMIT UNTIL PAID.
PLEASE RETURN UNPAID ITEMS PROMPTLY.

Fig. 27

soon as a record is made. The front, or original, sheet, though not perforated between the divisions, is perforated at the top, so that when the five divisions are filled, the entire sheet can be detached and filed as a permanent loose-leaf record of transactions.

TRANSACTIONS

26. The following items were received Tuesday, September 8, 19—, for collection:

James Myers, 10-day draft on John Harris Co., Boston, Mass., dated Sept. 8, 19—, listed No Protest, amount, $50.

From Eastern National Bank, New York, sight draft of William E. Foster, drawn on F. T. Peabody, dated Sept. 5, payable at the Equitable National Bank, listed No Protest, amount, $362.72.

NOTE TELLER

27. The note teller, or discount clerk, ranks third in importance in a bank. It is his duty to look after the making of all discounts and loans, to compute discount and interest, and to receive payment for all notes.

Bank notes are of two kinds, one an ordinary note and the other what is designated as a collateral note. The ordinary note, the form of which is shown in Fig. 28, is a written promise to pay to a certain person a stated amount at a given

$200.00 Hartford, Conn., Sept 8 19__
Two months after date I promise to pay to
the order of James Myers
Two hundred & 00/100 Dollars
AT THE EQUITABLE NATIONAL BANK OF HARTFORD, CONN.,
Without defalcation for value received
No.______ Due______ J. H. Steele & Co.

FIG. 28

time and place, and it is therefore a **time,** or **promissory, note.** When a note of this kind is discounted by a bank, the interest for the period it is to run is deducted in advance. A **collateral note,** the form of which is shown in Fig. 29, is a promissory note secured by the deposit of securities with the

$______ HARTFORD, CONN.,____________19__
____________AFTER DATE________PROMISE TO PAY TO THE ORDER OF

EQUITABLE NATIONAL BANK OF HARTFORD. CONN.

____________DOLLARS.
AT THE EQUITABLE NATIONAL BANK OF HARTFORD, CONN., FOR VALUE RECEIVED, without defalcation, hereby waiving all right to stay of execution and exemption of property in any suit on this note As collateral security______have delivered

which hereby authorize and empower the holder hereof, on default in payment on demand, with a view to its liquidation, and of all interest and costs thereon, to sell and transfer, in whole or in part, without any previous demand upon or notice to either at Broker's Board or at public or private sale, with the right of the holder hereof to become the purchaser and absolute owner thereof, free of all trusts and claims, should such sale be made at Broker's Board or be public. Furthermore agree, that so often as the market price of these and subsequently deposited securities shall, before maturity of this note, fall to a price insufficient to cover its amount, with per cent margin added thereto, will, on demand, within two hours thereafter deposit with the holder additional security, to be approved by said holder, sufficient to cover said amount and margin; and that, in default thereof this note shall become instantly due and payable, and all the foregoing rights to sell and transfer collaterals shall at once be exercisable, at risk in case of any deficiency in realizing proceeds. And further agree that the securities hereby pledged, together with any that may be pledged hereafter, shall be applicable in like manner to secure the payment of any past or of any future obligations held by the holder of this obligation, and all of securities in their hands shall stand as one general continuing collateral security for the whole of obligations, so that the deficiency on any one shall be made good from the collateral for the rest.

FIG. 29

bank. Interest on a note of this kind is paid monthly or at the time of the payment of the note, according to agreement.

28. When due, a note in the hands of a bank may be charged to the maker's account, the same as a check, or be paid

by cash or check, or it may be renewed in whole or in part. Notes drawn on other banks in the same clearing house are

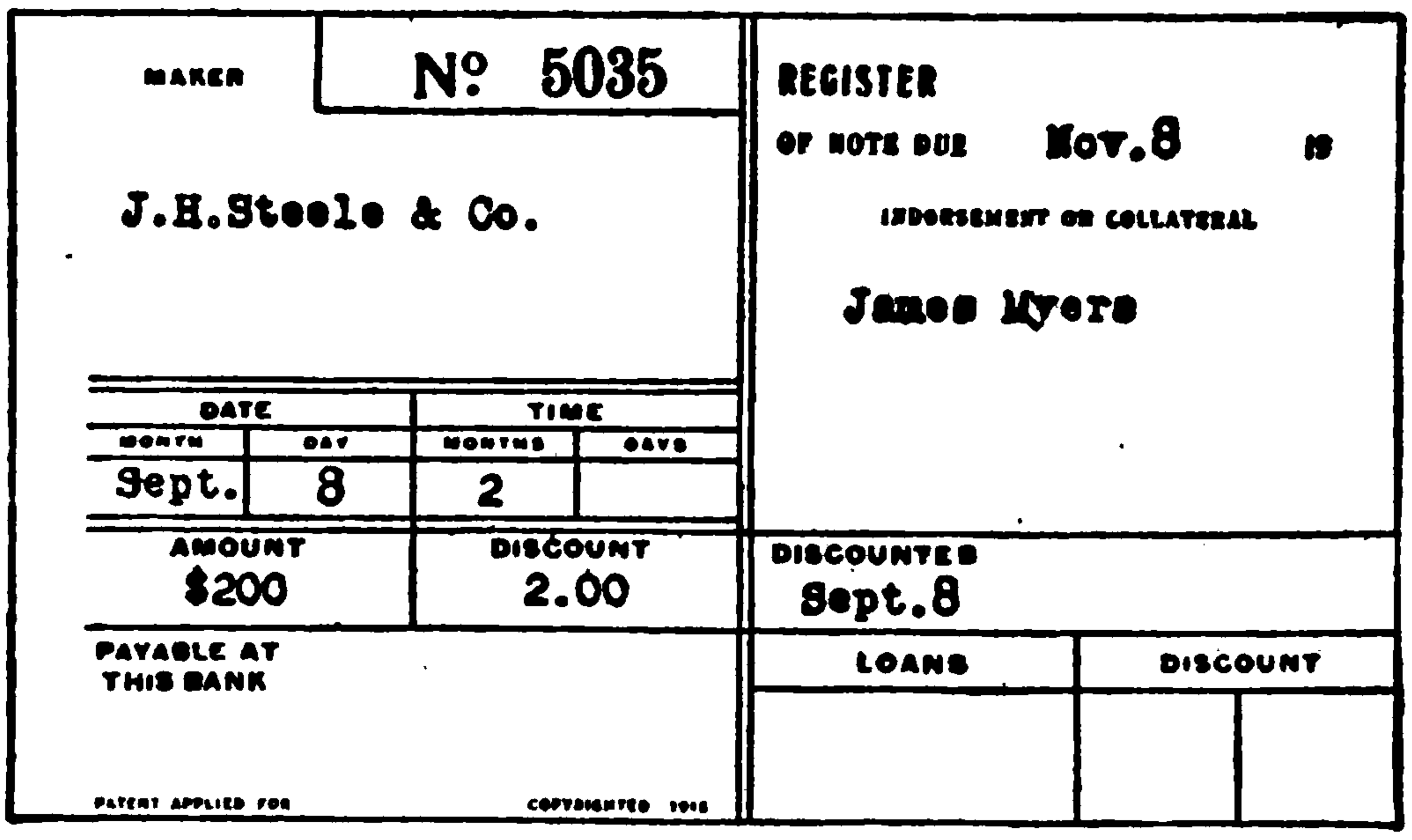


Fig. 30

usually presented by the bank's messenger the first thing in the morning on the day due and if they are O.K.'d by the bookkeeper of the paying bank they are sent to and paid through the clearing house. If a note is not good in the morning, it is presented again at closing time, and if good then it is O.K.'d, the amount noted against the maker's account, and is sent through the clearing house the next day. Notes not good in the afternoon are turned over to a notary public, who presents them for the last time, and if not good they are protested by the notary and returned the following morning to the protesting bank.

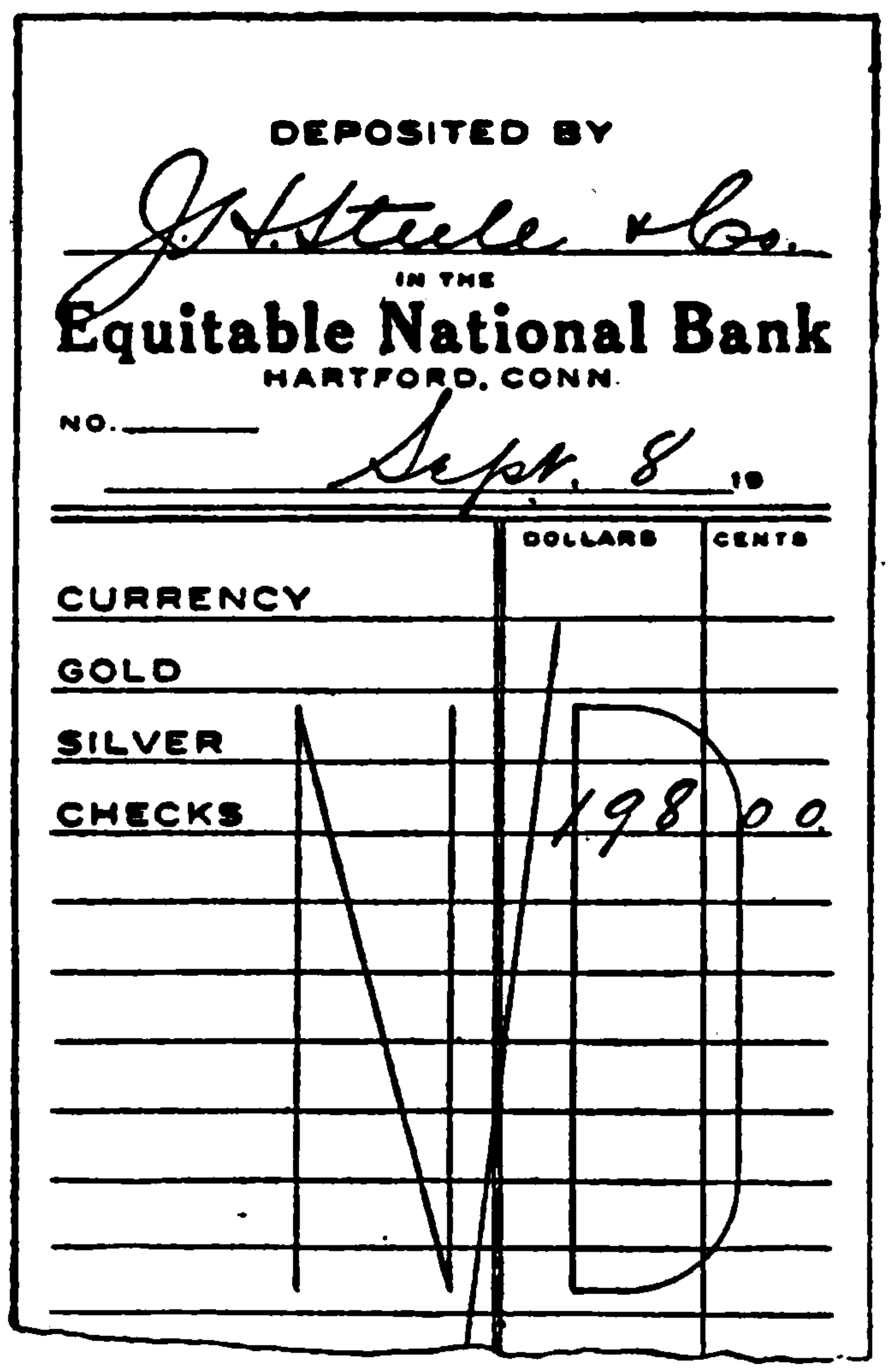
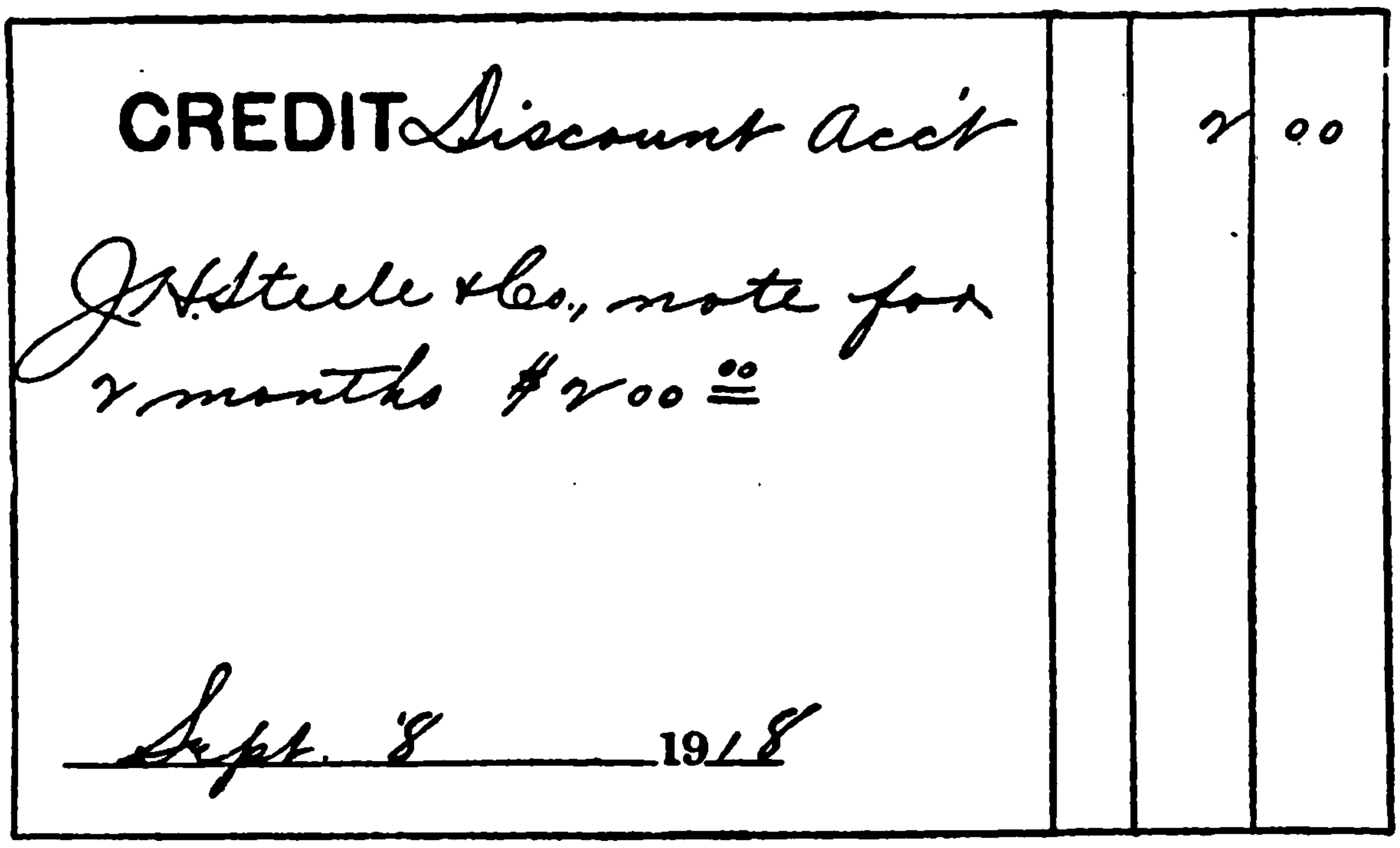


Fig. 31

29. The form of note register used differs to some extent. In recent years, however, many banks have adopted the **one-copy note register** devised by M. J. Philbin, a banker of Olyphant, Pennsylvania. This form of register has proved of such convenience that it is rapidly coming into general use.

The register consists of a set of five sheets of paper of different colors, each sheet containing five divisions like that



CREDIT Discount Acct | 2 | 00

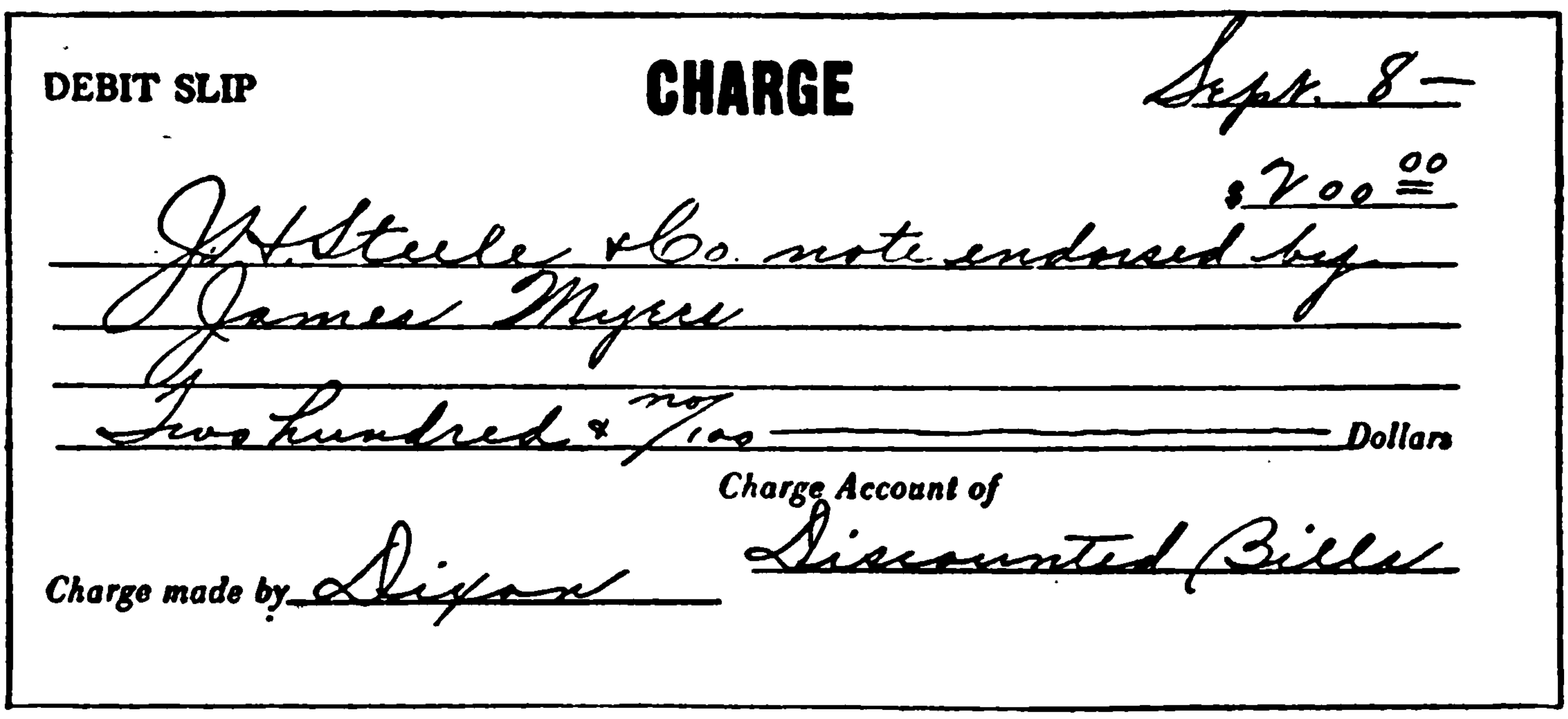
J. H. Steele & Co., note for 2 months $200.00

Sept. 8 1918

FIG. 32

shown in Fig. 30, which provides for recording five transactions, and five copies of each are made at one writing. Each set of five sheets is bound together at the top, and the four under sheets are perforated so that the copies can be detached and filed separately. The top sheet is not perforated and when all the divisions are filled the entire sheet is filed on a post binder and the sheets become the permanent loose-leaf register.

The copy on the second sheet is a duplicate of the first sheet, except that the date the note was discounted does not show



DEBIT SLIP CHARGE Sept. 8—

$200.00

J. H. Steele & Co. note endorsed by James Myers

Two hundred & no/100 Dollars

Charge Account of Discounted Bills

Charge made by Dixon

FIG. 33

on account of being written on a dark-printed space. This copy is the notice of the due date, and is usually sent to the

maker a week in advance of the date. The copy on the third sheet is a duplicate of the first and is what is known as the tickler, which is filed in a case under the due date of the note. The copy on the fourth sheet is known as the indorser's form, and is filed in a case under the name of the indorser. The copy on the fifth sheet is known as the maker's copy, and is

United States of America,
State of Connecticut,
City of Hartford, ss:

Be it known, That, on the day of the date hereof, at the request of the

Equitable National Bank of Hartford, Conn.

the holder of the ____________ hereto attached, I, CHARLES H. WILLIAMS, Notary Public for the Commonwealth of Connecticut, by lawful authority, duly commissioned and sworn, residing in the City of Hartford, Hartford County, presented the

same at the bank where payable to ____________ the ____________

and demanded thereof, which was refused and answer made—

Whereupon, I, the said Notary, at the request aforesaid, have protested, and do hereby solemnly protest against all persons and every party concerned therein, whether as Maker, Drawer, Drawee, Acceptor, Payer, Indorser, Guarantor, Surety, or otherwise, howsoever against whom it is proper to protest, for all Exchanges, Costs, Damages and Interests,

suffered and to be suffered, for want of ____________ thereof, of all which

I notified the ____________

Witness my hand and official seal, at the City of Hartford,

this ____________ day of ____________, 19__

[NOTARY SEAL]

My Commission expires January 19, 19 Notary Public

FIG. 34

filed in a case under the name of the maker. The fourth and fifth copies contain a space for recording payments that may be made on a note. The amount due is written in the first space on the two copies and if payment should be made on the note before it is due the original amount is crossed out and the new amount filled in.

When notes are paid, the filed copies are removed and filed in the dead-file case.

30. When a note is discounted for a customer, the proceeds are usually credited to his account by means of a deposit ticket, as shown in Fig. 31, and the amount of the discount is credited to the Discount account in the general ledger by means of a credit slip like that shown in Fig. 32. The face amount of the note is debited to the Discount account in the general ledger by means of a charge slip like that shown in Fig. 33, which carries a full description of the note. The note is filed in the note file under its due date.

Hartford, Conn., ______________

To ______________

A ______________ *drawn by*

____

______________ *payable at*

______________ *Bank*

of Hartford, Conn., for payment of $ ______________ 100

at ______________ *after date*

dated ______________

and indorsed by ______________

____

______________ *having*

been duly presented this day, and payment being refused upon presentation and demand made, was protested by me for non-payment, and you will be looked to for payment of the same.

Please forward enclosed notices, if any, to your indorser.

Respectfully yours,

CHARLES H. WILLIAMS,

Notary Public

FIG. 35

31. If a note is not paid or otherwise provided for at maturity, it is protested by a notary public or other authorized public officer for non-payment. **Protest** is a legal procedure by which the bank makes formal demand for payment by means of a certificate of protest, shown in Fig. 34. This certificate is attached to the note, and formal notice of the protest is sent to the maker and each indorser of the note on a form like that shown in Fig. 35.

TRANSACTIONS

32. The following transactions took place in the note teller's department on Tuesday, September 8, 19—:

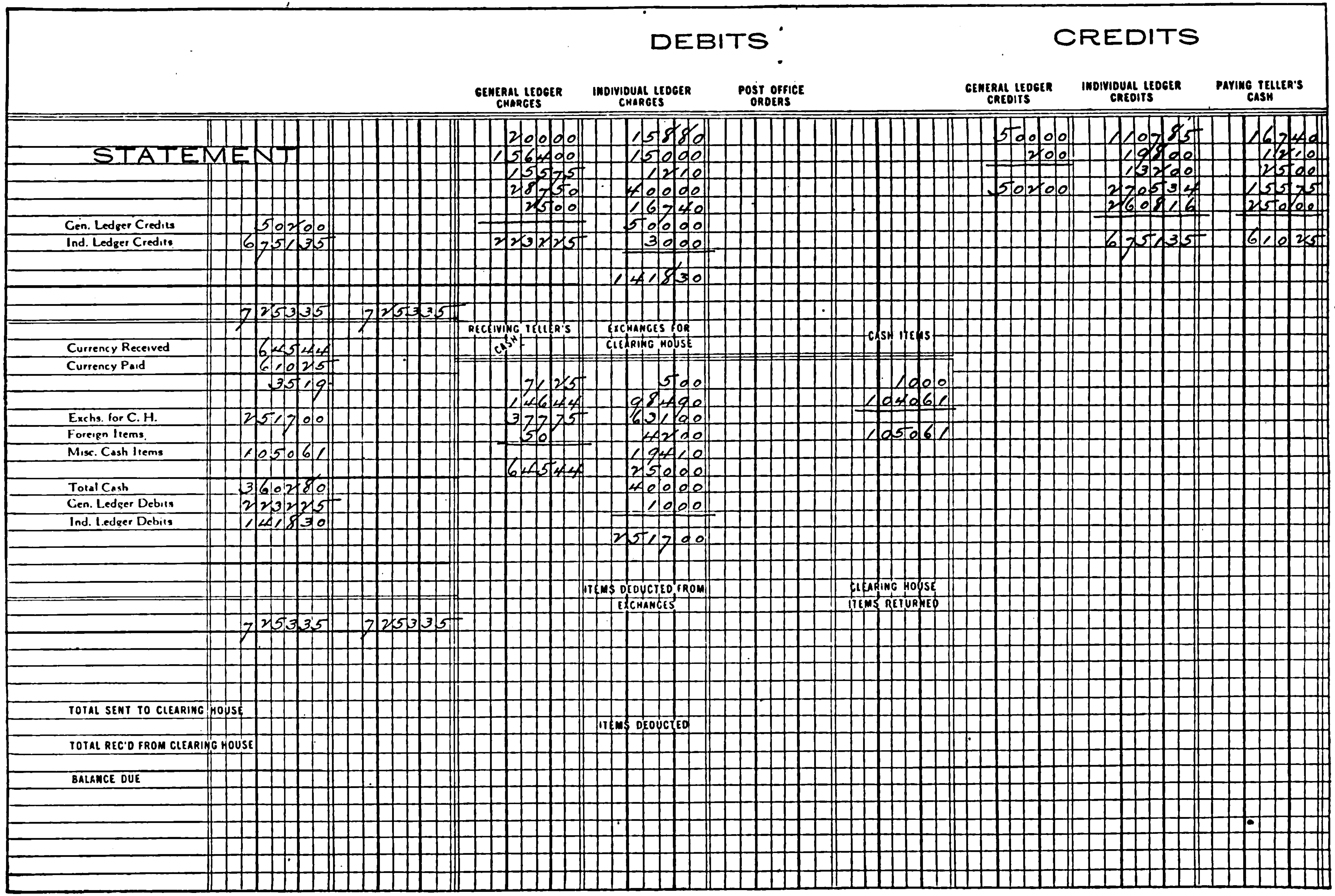
Discounted today the note of J. H. Steele & Co., dated Sept. 8, 19—, for 2 months, amount $200, indorsed by James Myers. Proceeds, $198, credited to the account of J. H. Steele & Co.

PROOF-BOOK CLERK

33. The proof-book clerk ranks last among the bookkeepers of a bank and a step above the bank messenger, which is the position usually filled by the beginner in the banking business.

The **proof book** is a sheet ruled in columns for the record of the cash transactions of all the tellers of the bank. It is a general-balance book and serves as the bank's own clearing house for the redistribution of the items handled each day. It balances in itself and all other books are balanced from the figures furnished by it. At intervals during the day, usually hourly, the items of the various tellers are sent to the proof book, where they are entered in columns showing the transactions of each, as illustrated in Fig. 36, which shows how the work of September 8 was handled by the proof-book clerk.

34. As the items are received by the proof-book clerk he checks up each deposit ticket to see that all checks are properly listed, that the footing is correct, and that each check is properly indorsed. If found to be correct, the cash amount is entered in the column for the receiving teller, and the deposit ticket is then placed on the credit side and the checks on the debit side of the distributing case. At different times during the day the proof-book clerk totals on an adding machine the debit and credit items for the individual and general ledgers, enters the amounts in the proper columns of the proof-book sheet, and sends the items to the bookkeepers for entry in the ledgers. Checks drawn on the bank at which they are paid are entered on the proof-book sheet as individual ledger charges, and those drawn on other banks are entered as general-



	STATEMENT		DEBITS: GENERAL LEDGER CHARGES	DEBITS: INDIVIDUAL LEDGER CHARGES	DEBITS: POST OFFICE ORDERS		CREDITS: GENERAL LEDGER CREDITS	CREDITS: INDIVIDUAL LEDGER CREDITS	CREDITS: PAYING TELLER'S CASH
			200 00	158 80			500 00	1107 85	167 40
			1564 00	150 00			2 00	198 00	12 10
			155 75	12 10				137 00	25 00
			28 50	400 00			502 00	2705 34	155 75
			25 00	167 40				2608 16	250 00
Gen. Ledger Credits	502 00			500 00					
Ind. Ledger Credits	6751 35		2232 25	30 00				6751 35	610 25
				1418 30					
	7253 35	7253 35							
			RECEIVING TELLER'S CASH	EXCHANGES FOR CLEARING HOUSE		CASH ITEMS			
Currency Received	645 44								
Currency Paid	610 25								
	35 19		71 25	5 00		10 00			
			146 44	984 90		1040 61			
Exchs. for C. H.	2517 00		377 75	631 00					
Foreign Items			50	42 00		1050 61			
Misc. Cash Items	1050 61			194 10					
			645 44	250 00					
Total Cash	3602 80			400 00					
Gen. Ledger Debits	2232 25			10 00					
Ind. Ledger Debits	1418 30								
				2517 00					
				ITEMS DEDUCTED FROM EXCHANGES		CLEARING HOUSE ITEMS RETURNED			
	7253 35	7253 35							
TOTAL SENT TO CLEARING HOUSE									
				ITEMS DEDUCTED					
TOTAL REC'D FROM CLEARING HOUSE									
BALANCE DUE									

FIG. 36

ledger charges. Paid checks drawn on other banks are entered in the ledger against the banks on which drawn, and the total for each is listed on the form shown in Fig. 37 for clearing-house exchanges.

35. At the close of the day's business the debit and credit columns of the proof-book sheet are totaled, and each teller is furnished with the total of his day's transactions, with which his account should agree. After these totals are proved to be correct, the proof-book clerk makes out a recapitulation as shown under the head of Statement, as shown on the left-hand division of Fig. 36, and as there is always an equal debit and credit amount for each transaction, the debit and credit totals of the proof book must agree.

HARTFORD CLEARING HOUSE ASSOCIATION

EXCHANGE LIST

From ____________________ Bank

________________ 19__

1	Hartford National Bank			
2	Farmers and Mechanics Bank			
3	National Exchange Bank			
4	State Bank			
5	First National Bank			
6	Equitable National Bank			
	Total			

Fig. 37

INDIVIDUAL-LEDGER BOOKKEEPER

36. The individual-ledger bookkeeper ranks fifth in importance among the employes of a bank. He has charge of the ledger in which the individual checking accounts are kept and comes into personal contact with depositors when any question regarding accounts arises. Entries in the ledger are made from debit and credit memorandum slips, the forms of which have already been shown, and the bookkeeper must always be on the alert, because the bank is liable for the amount when an item has been posted to the ledger. He must therefore scrutinize each check carefully to see that it is correctly drawn, that it is properly signed, that it is not dated ahead, that there has been no alteration or erasure, that it has been properly indorsed, and that no stop-payment notice has been given.

37. What is known as the **Boston ledger** is the form of ledger in general use for individual accounts. This ledger is arranged in six divisions across each two facing pages, thus providing for recording a week's transactions. Each of the six divisions is ruled into four columns headed Checks in Detail, Debit, Credit, and Balance, as illustrated in Fig. 38, which shows one of the six divisions and a part of another. In this ledger the names of depositors are generally printed in alphabetical order when the ledger is made, enough pages without printed names being added to take care of new accounts. All checks drawn against an account are entered separately in the

Sept. 8. 19–

BALANCE	CHECKS IN DETAIL	DEBITS	CREDITS	BALANCE	
10 00	12 10	12 10	132 00	129 90	Fostelle, Lucy B.
	400				
100 00	167 40	1 067 40	2 705 34	1 737 94	W. H. Gillette & Co.
	500				
	158 80	158 80	1 107 85	949 05	James Myers
50 00	30	30	2 608 16	2 628 16	F. I. Peabody
200 00	150	150	198	248	J. H. Steele & Co.
360	1 418 30	1 418 30	6 751 35	5 693 05	

Fig. 38

column under the heading Checks in Detail and at the close of business the total for each account is entered in the Debit column. All of the columns are then footed, and if no mistake has been made the total of the Checks-in-Detail column will agree with the total of the Debit column. All pages are footed in the same way, after which the debit footings are combined and carried to the individual-ledger account in the general ledger and the credit footings are treated in the same way.

After a trial balance has been taken, at the close of the day's business or the next morning, the balance for each account is

EQUITABLE NATIONAL BANK, HARTFORD, CONN.

SHEET NO. ______________

NAME James Myers

ADDRESS 116 Larch Street

OLD BALANCE	DATE	CHECKS IN DETAIL	DATE	DEPOSITS	DATE	NEW BALANCE
		BALANCE BROUGHT FORWARD ☞				
	SEP 8	158.80	SEP 8	1,107.85	SEP 8	949.05

Fig. 39

filled in and the Balance column proved for each page. This is done by adding the day's credits to the previous balance, deducting the day's debits, and carrying the amount obtained to the next Balance column. The total of the balance column is proved in the same way from the totals of the Credit and Debit columns. If an account is found to be overdrawn, the entry in the Balance column is made in red ink, the amount being deducted from, instead of added to, the total of the column.

38. Many of the larger banks use what is known as the **posting-machine system,** which is a system involving the use of a loose-leaf ledger instead of the Boston ledger, one sheet being used for each account carried. The entries to an account are made by the posting machine, which is operated by the bookkeeper either by hand or by electric power. The form of the loose-leaf ledger is shown in Fig. 39. When an account is opened, the name and address of the depositor is typewritten at the top of the sheet, which is then put in the posting machine by means of which the entries are made.

As items are received from the proof-book clerk, the deposits, or credits, and checks, or debits, are listed separately on plain sheets, from which they are posted to the account sheets, the totals of which should agree with the proof-book balance. Deposits are entered on the account sheet in the column headed Deposits, and the paid checks in the column headed Checks in Detail, as shown in the illustration, Fig. 39, and the date must show for each day's transactions for any account. The new balance is found in the same way as for the Boston ledger by adding on the machine the day's deposits to the previous day's balance and deducting the amount of the paid checks.

39. The correctness of the balances of the accounts is proved by taking off a statement of all the accounts on which there were transactions during the day. The columns are totaled and the lesser of the balances is subtracted from the greater. If the total of the new Balance column is greater than that of the old, the correctness of the balances is shown by

the fact that the amount by which the deposits exceed the withdrawals is exactly equal to the difference between the old and new Balance columns; if the total of the new Balance column is less than that of the old, the difference between

Equitable National Bank

HARTFORD, CONN., ________________ 19

____

According to our books your account appears overdrawn $____________ We therefore request that you examine your pass book and advise us if we are correct. If you find that we are correct, please deposit funds to cover, as it is contrary to the policy of this bank to carry overdrafts.

Respectfully,

____

CASHIER

FIG. 40

the totals of the old and new Balance columns is exactly equal to the amounts by which the withdrawals exceed the deposits.

By this system statements of accounts are made once a month or oftener if requested, and are receipted for by customers.

Dr. Equitable National Bank, in account with					James Myers				Cr.
Sept.	8			1 107 85				158 80	
						Balance		949 05	
				1 107 85				1 107 85	
		Balance		949 05					

FIG. 41

tomers. This system obviates the necessity of balancing pass books, which are considered merely as receipt books for deposits.

40. The duties of the individual-ledger bookkeeper include the notification of depositors when their accounts have been

overdrawn and the balancing of pass books of customers of the bank. The form used for notifying customers of overdrafts is illustrated in Fig. 40, and a balanced pass book is illustrated in Fig. 41.

41. The debit entries in the pass book are made by the receiving teller as the deposits are made and the credit entries are made by the bookkeeper when the pass book is presented. The credit entries are the charges against the customer's account since the pass book was last balanced and are made directly from the paid checks or other memoranda. Usually, when the credit items are numerous, only the total is entered in the pass book with a notation of the number of vouchers, the items being shown on an adding-machine list which accompanies the canceled vouchers.

TRANSACTIONS

42. The following debits and credits have been assembled for entry on the individual ledger as a result of the transactions in the different departments on Tuesday, September 8, 19—:

Deposit tickets from receiving teller:	
Lucy B. Fostelle	$ 132.00
W. H. Gillette & Co.	2,705.34
James Myers	1,107.85
F. T. Peabody	2,608.16
Deposit ticket from note teller:	
J. H. Steele & Co.	$ 198.00
Checks from paying and receiving tellers:	
Lucy B. Fostelle	$ 12.10
W. H. Gillette & Co.	400.00
W. H. Gillette & Co.	167.40
W. H. Gillette & Co.	500.00
James Myers	158.80
F. T. Peabody	30.00
J. H. Steele & Co.	150.00

Tuesday, September 8, 19 | Wednesd

BALANCE	REMARKS	DEBIT	CREDIT	REMARKS	BALANCE	RESOURCES	REMARKS
804 322 12		200			804 522 12	Discounts	
133 500					133 500	Loans	
50 000					50 000	U. S. bonds to secure circulation	
25 000					25 000	Banking house	
5 000					5 000	Furniture and fixtures	
1 500					1 500	Premium on U. S. bonds	
460 000					460 000	Stocks and bonds	
124 335 69		2 032 25			126 367 94	Correspondents	
1 000					1 000	Due from U. S. Treasurer	
200					200	Protests	
202 68					202 68	Expense	
5 780					5 780	Salary account	
2 500					2 500	Five per cent. redemption fund	
		4 213 05	610 25				
144 920 84					148 523 64	Cash	
1 758 261 33		6 445 30	610 25		1 764 096 38		

				LIABILITIES	
500 000			500 000	Capital stock	
200 000			200 000	Surplus fund	
51 906 70			51 906 70	Undivided profits	
30 202 17			30 202 17	Profit and loss	
50 000			50 000	Circulation	
911 219 64	1 418 30	6 751 35	916 552 69	Deposits	
		500 00	500 00	Certified checks	
2 860 50			2 860 50	Dividends unpaid	
11 683 54		2 00	11 685 54	Interest and discount	
388 78			388 78	Collection and exchange	
1 758 261 33	1 418 30	7 253 35	1 764 096 38		

FIG. 42

GENERAL-LEDGER BOOKKEEPER

43. The general-ledger bookkeeper ranks fourth in importance among the employes of a bank. He has charge of the general books, among which are the general ledger, cashier's-check register, draft register, and certified-check register.

44. The **general ledger** contains all the general accounts of the bank. It is similar in form to the individual ledger in general use, differing mainly in the fact that the pages are ruled in two divisions, the upper half for resource accounts and the lower half for liability accounts, as shown in Fig. 42. At the end of the day the new balances are carried forward and the columns for each half of the page footed. The resource balances are found by adding the amount in the debit column to the previous balance and then subtracting the credit amount. The liability balances are found by adding the credit amount and deducting the debit amount. Every 6 months or oftener the income and expense accounts are closed and carried to the profit-and-loss account.

This form of general ledger shows the daily condition of every account, and it is the work of but a few moments for the bookkeeper to make a transcript of the accounts when called for by the officers of the bank.

45. The **draft register** is a book in which a record is made of the drafts drawn on correspondent banks, a separate account being kept for each. The form of the draft register is illustrated in Fig. 43. As each draft is drawn an entry is made to show the date, the draft number, in whose favor it is drawn, the amount, the exchange charges, and the person or purpose for which it was drawn. At the close of the day's business the Amount column is totaled, the amount being carried to the Day Total column, and a credit ticket is made out for the account of the correspondent bank in the individual ledger.

46. The **cashier's-check register,** which is illustrated in Fig. 44, is a book in which all cashier's checks issued are

EQUITABLE NATIONAL BANK

DRAFTS DRAWN ON EASTERN NATIONAL BANK, NEW YORK

DATE	NUMBER	IN FAVOR OF	AMOUNT	DAY TOTAL	EXCHANGE	FOR

FIG. 43

recorded. It shows the date of issue of each check, its number, the name of the payee, and the amount. At the close of business each day the Amount column is footed and the total entered in the Day Total column and a credit ticket is made out to carry the amount to the Cashier's account in the individual ledger. The last column is for the entry of the date on which the check is paid.

47. The **certified-check register,** illustrated in Fig. 45, is a book in which a record is made of all certified checks issued. It has columns for the entry of the date, the name of the drawer, the name of the person to whose order it is drawn,

THE EQUITABLE NATIONAL BANK

CASHIER'S CHECKS

DATE	NUMBER	PAYEE	AMOUNT	DAY TOTAL	WHEN PAID

FIG. 44

the name of the person it was certified for, as well as the amount, the day total, and the date paid. As each entry is made, a debit ticket is made out to charge the amount to the account of the drawer. At the close of the day's business the Account column is footed and the total carried to the Day total column, after which a credit ticket is made out to carry the total amount to the account of Certified Checks in the individual ledger.

48. The general-ledger bookkeeper also handles a number of forms, the most important of which is a **remittance sheet,** illustrated in Fig. 46. This is a form used for listing checks drawn on banks outside the limits of the local clearing

EQUITABLE NATIONAL BANK

CERTIFIED CHECKS

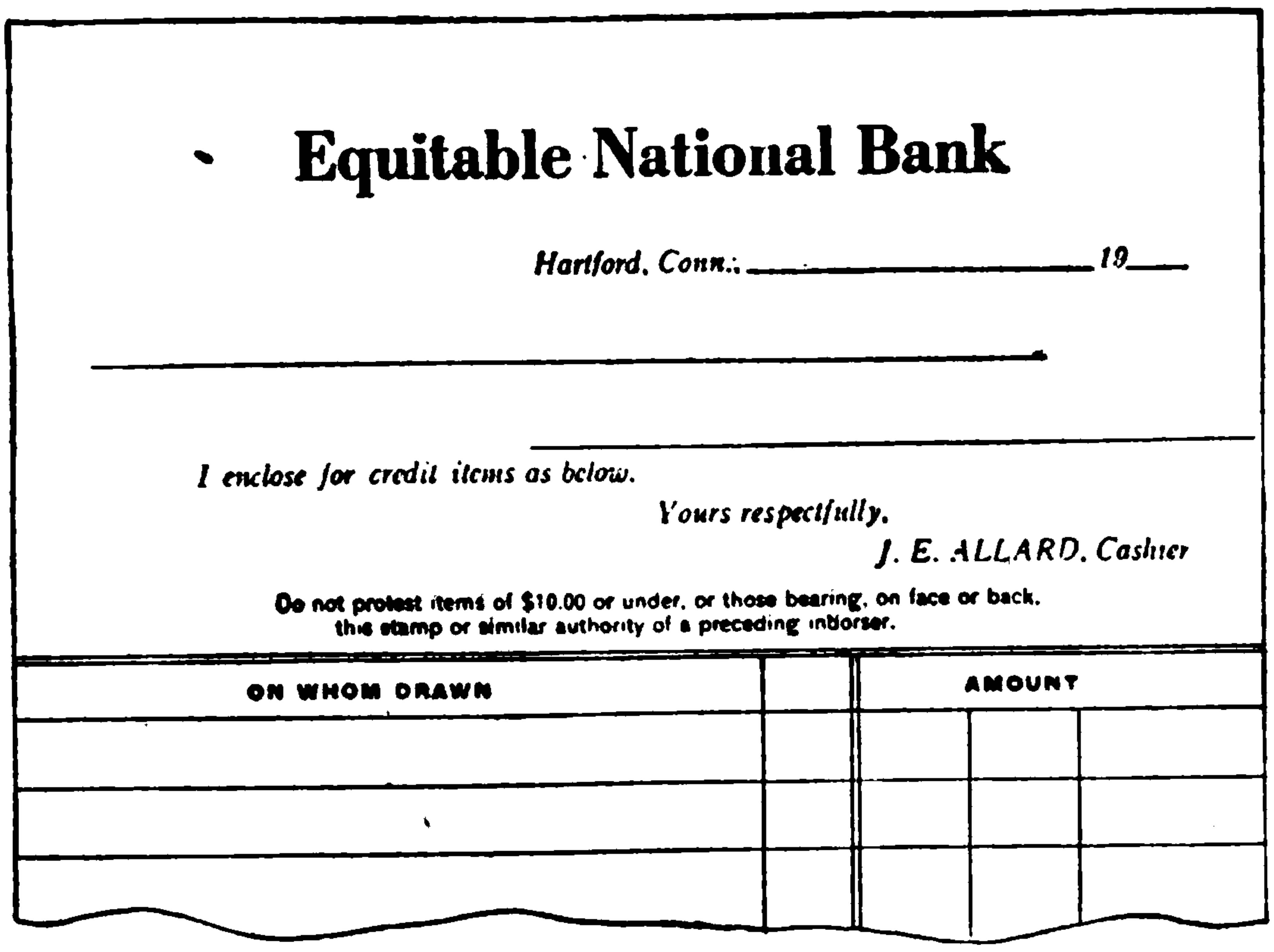
DATE	DRAWER	TO ORDER OF	CERTIFIED FOR	AMOUNT	DAY TOTAL	DATE PAID

FIG. 45

house and is sent with the items to a correspondent bank for credit. A carbon copy of the remittance sheet is made on an under sheet which is wider than the top sheet and contains an extra column for noting the name of the last indorser for each item. This is filed as the bank's record. The second column on the sheet is for indicating whether a check is to be protested if not paid. No protest is indicated on the remittance sheet by an X.

49. As a rule, items of $10 or under are not protested. Items of more than $10 are protested unless they are stamped otherwise by the bank or bear the authority of a preceding indorser for no protest. The total amount listed on the remittance sheet is debited to the account of the correspondent bank in the individual ledger by means of a debit slip. When a similar notice of remit-

tance is received by the Equitable it sends an advice of credit, the form of which is shown in Fig. 47. When items are received from another bank and are not to be credited to an account nor sent to a correspondent bank, the receiving bank



Equitable National Bank

Hartford, Conn., ________________ *19*___

I enclose for credit items as below.

Yours respectfully,

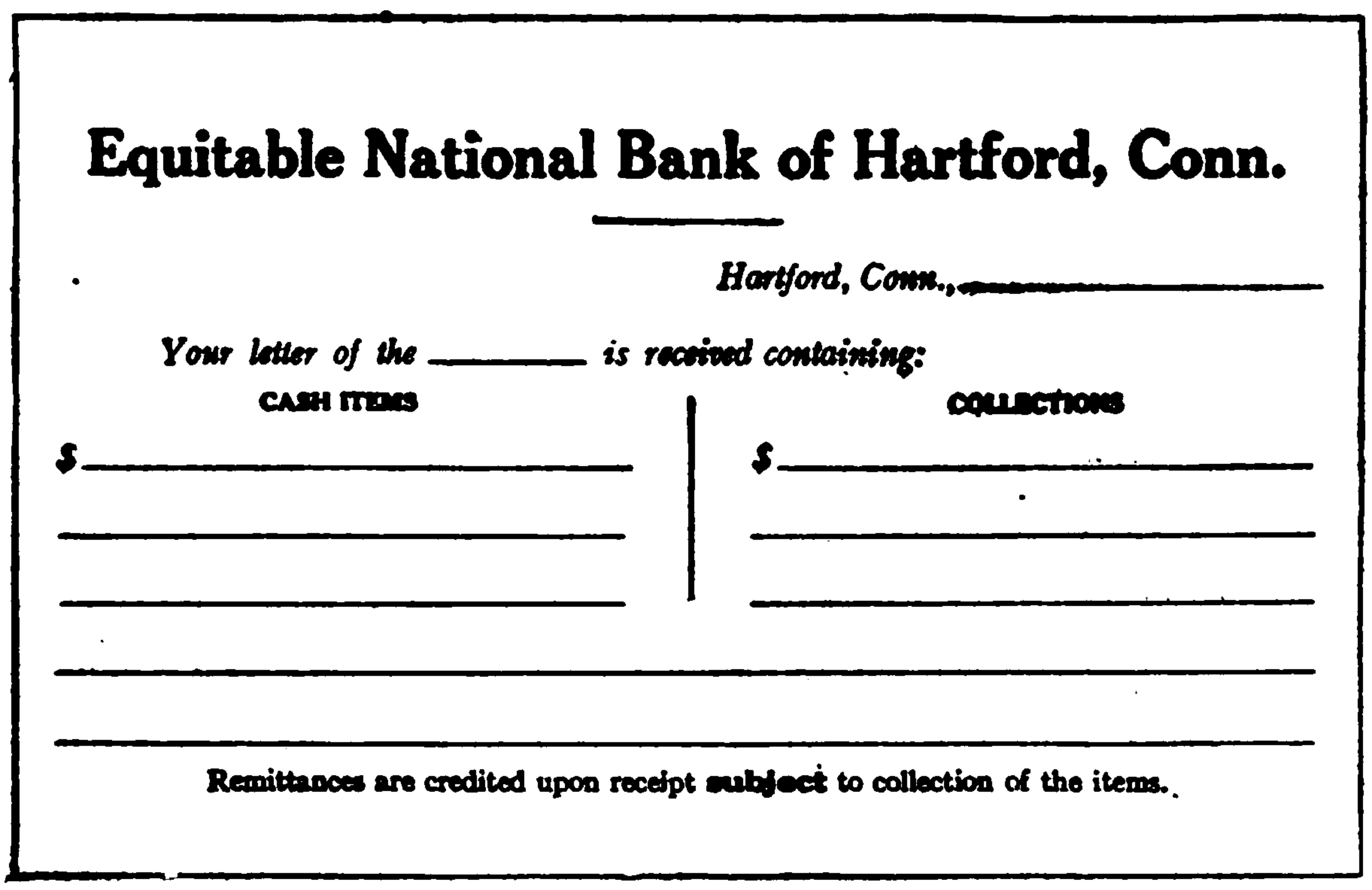
J. E. ALLARD, Cashier

Do not protest items of $10.00 or under, or those bearing, on face or back, this stamp or similar authority of a preceding indorser.

ON WHOM DRAWN		AMOUNT

FIG. 46

remits the amount to the sending bank with a letter of advice of the form shown in Fig. 48. The carbon copy of this letter



Equitable National Bank of Hartford, Conn.

Hartford, Conn., ________________

Your letter of the ________ *is received containing:*

CASH ITEMS	COLLECTIONS
$	$

Remittances are credited upon receipt subject to collection of the items.

FIG. 47

of advice, which has a column headed Remarks, is filed as the bank's record.

When checks that are received from another bank are not paid they are returned to the sending bank, together with a letter of advice of the form shown in Fig. 22.

THE CLEARING HOUSE

50. Organization.—A clearing house is an organization formed by local banks in cities of any business importance for

Equitable National Bank

Hartford, Conn., ________________ *19*

____

____

We enclose herewith draft for $ __________

Exchange, __________

Total, __________

in payment of items mentioned below.

Yours respectfully,

J. E. ALLARD, Cashier

YOUR LETTER DATE OR NUMBER	ON WHOM DRAWN	AMOUNT

FIG. 48

the purpose of satisfactorily effecting the exchange of checks between them and also of enabling them to take united action on any matter affecting their interests. The organization is composed of a representative of each member bank and operates under a constitution and by-laws. Its officers are a president, a vice-president, a secretary, and a manager, who are chosen annually. The manager has charge of the daily routine business of the clearing house, and the association meets at the call of the president

________________________ Bank

EXCHANGE ITEMS $ __________

EQUITABLE NATIONAL BANK
HARTFORD, CONN.

________________________ 19__

1

FIG. 49

to pass on all questions affecting the policy of the organization. The office of the clearing house is usually located in a central bank building.

51. Preparation for Clearing.—Each bank prepares for clearing by first making a list of all checks for the clearing house and then entering the total amount on the proof-book sheet shown in Fig. 36. The checks are then assorted into groups for the various members of the clearing house, after which a list is made of the items for each and the totals ascertained. These totals are then entered in the clearing-house exchange list shown in Fig. 37, and the column footed. The total of the exchange list must agree with the amount entered on the proof-book sheet as the total sent to the clearing house, and when these amounts are found to agree, a duplicate adding-machine list is made of the items and the total for each bank of the clearing house. The original copy is sent to the clearing house with the checks and the carbon copy is kept as the bank's record. The checks for each bank are then stamped with the name and number of the sending bank as well as the date and are enclosed in envelopes for the different banks together with the list of items for each. The envelopes of each bank are printed with the bank's name and number, as well as a space for entering the name of the bank with which exchange is made and also the amount of the exchange, as shown in Fig. 49. The amount on the envelope for each bank must be the same as the amount entered on the clearing-house exchange list against that bank.

52. Clearing Operations.—Clearings are made each business day at exactly 12 o'clock, noon. The envelopes containing the exchanges are taken to the clearing house by bank messengers, and a bank is fined for the failure of its messenger to appear promptly or for any error in its exchange list.

The messenger of each bank delivers the adding-machine lists of the items of exchange to the manager of the clearing house, who enters the amount for each bank in the proper column on the clearing-house exchange sheet, and the envelopes

Hartford Clearing House Association

Exchanges 19

	BANKS	1 Hartford National	2 Farmers & Mechanics	3 National Exchange	4 State	5 First National	6 Equitable National	TOTAL SENT TO CLEARING HOUSE	DR.	CR.	
	1 Hartford National										1
	2 Farmers and Mechanics										2
	3 National Exchange										3
	4 State										4
	5 First National										5
	6 Equitable National										6
	Total Rec'd from Clearing House										

Fig. 50

containing the items are then exchanged with the various messengers for those sent by the other banks.

The form of the clearing-house exchange sheet is shown in Fig. 50. On this sheet, the banks are listed across the sheet and down the left-hand column according to their clearing-house number. The amount of the clearings presented by each of the banks against each of the other banks is entered in the column under the name of the bank against which it is presented and opposite the name of the bank presenting it. For example, the clearing checks of the Hartford National Bank, which is No. 1, against the Farmers and Mechanics Bank, which is No. 2, would be entered in the column under the heading Farmers and Mechanics and in the top space opposite the name of the Hartford National. The amount of the Hartford National against the National Exchange, which is No. 3, would also be entered on the first line, but in the column under the heading National Exchange, and so on across the page for all the banks of the clearing-house association against which the Hartford National presents clearings. The clearings of all the other banks are listed in the same way.

53. When the amounts of the clearings have been listed they are totaled across the page for each bank and the amount is entered in the column headed Total Sent to Clearing House. Each of the columns is then footed and the amount for each bank is entered as the total received from the clearing house. If the total amount of checks sent to the clearing house by any one of the banks exceeds the total amount received against that bank, then the clearing house owes that bank and the amount is entered in the credit column opposite the name of the bank. If the total amount of checks sent to the clearing house by the bank is less than the amount received against that bank, then the bank owes the clearing house and the amount is entered in the debit column. As there must be an equal debit for every credit, the debit and credit columns of the clearing-house exchange sheet must balance.

54. Balances are settled at the clearing house and paid for in currency unless otherwise arranged for. The debtor banks

pay the clearing house each day between 1:15 and 1:30 P. M., except on Saturday, when payment is made between 11:15 and

HARTFORD CLEARING HOUSE

________________ 19 ____

RECEIVED from No. ____________

____

________________________ **Dollars, $** ________

in settlement of balance due Clearing House this day

____

Manager

FIG. 51

11:30 A. M., and the clearing house pays the creditor banks between 1:30 and 1:45 except on Saturday, when payment is made between 11:30 and 11:45 A. M.

When a bank pays the clearing house, the clearing house issues a receipt of the form shown in Fig. 51, and when the clearing house pays a bank, the bank issues a receipt of the form shown in Fig. 52.

Errors in exchanges, or checks not good or improperly drawn or indorsed, are adjusted directly by the banks con-

HARTFORD CLEARING HOUSE

________________ 19 ____

Received from HARTFORD CLEARING HOUSE

________________________ Dollars, $ ________

in settlement of balance due ________________________

No. __________, this day.

____

Cashier

FIG. 52

cerned before 2 o'clock each day, except on Saturday, when adjustment is made before 11:30 A. M.

BANK STATEMENT

55. At certain times during the year the United States Comptroller calls on each national bank for a statement of its

CONDENSED STATEMENT

COMPTROLLER'S CALL, MAY 10, 19—

RESOURCES	
Cash on Hand and in Banks	$ 1,182,118.62
Loans and Investments	9,922,619.22
United States Government Securities	1,997,693.09
Due From Treasurer of United States	41,750.00
Bank Building and Other Real Estate	286,931.68
Customers' Liability Under Letters of Credit	8,650.27
Overdrafts	309.60
Other Assets Not in Above	47,525.76
	$13,487,598.24
LIABILITIES	
Capital	$ 750,000.00
Surplus	500,000.00
Undivided Profits	390,977.65
Reserve for Interest	60,000.00
Circulation	739,747.50
Dividends Unpaid	684.50
Letters of Credit	10,537.30
Discounts and Rediscounts With Federal Reserve Bank	781,380.00
Deposits	10,254,271.29
	$13,487,598.24

FIG. 53

resources and liabilities on a specified date. This is furnished in detail and a condensed statement, as shown in Fig. 53, is published in the newspapers.

56. The resources of a bank, which are the cash and the securities and property that can be converted into cash, are listed in these statements under eight heads, as follows:

1. Cash on Hand and in Banks, which consists of cash in the vault and amounts on deposit with other banks.

2. Loans and Investments, which are discounted notes, short-term investments, commercial paper, and bonds other than United States government bonds.

3. United States Government Securities, which are United States treasury notes, certificates of indebtedness, and Liberty Loan bonds.

4. Due From Treasurer of the United States, which consists of money sent to the United States treasurer for redemption and funds to the amount of 5 per cent. of the capital stock of the bank held by the United States treasurer as a redemption fund.

5. Bank Building and Other Real Estate, which is the amount carried on the books of the bank as the value of its bank building and other real estate.

6. Customers' Liability Under Letters of Credit, which consists of cash, certified checks, notes, stocks, and bonds held as security for letters of credit and traveler's checks issued to customers.

7. Overdrafts, which are obligations of customers of the bank for overdrafts.

8. Other Assets, which include all assets not listed under the preceding heads.

57. The liabilities of a bank, which are the amounts the bank owes to stockholders, customers, banks, and the government, are listed in the bank statement under nine heads, as follows:

1. Capital, which is the amount paid into the bank by the stockholders and used as the working capital.

2. Surplus, which is earnings of the bank held on deposit or invested.

3. Undivided Profits, which consists of earnings set aside for the payment of any debts of a bank.

4. Reserve for Interest, which consists of a fund set aside from undivided profits to pay interest on money on deposit.

5. Circulation, which consists of the national bank notes of the bank in circulation and which may be equal to the bank's capital.

6. Dividends Unpaid, which consists of amounts due stockholders whose dividend checks have not been presented for payment.

7. Letters of Credit, which consists of funds deposited by customers to cover letters of credit or travelers' checks issued by the bank.

8. Discounts and Rediscounts With the Federal Reserve Bank, which is the amount of the discounts and rediscounts held by the Federal Reserve Bank against the bank.

9. Deposits, which is the amount of money on deposit with the bank.

BANK EXAMINATION

58. All national banks are examined and checked up by bank examiners under the direct control of the United States government. The government has blocked off the states into districts, and each district has a number of expert accountants and bookkeepers who conduct examinations of every national bank in a district at least twice each year.

State banks are under the control of the state in which they are located and are examined at least twice a year by experts who are employed by the state. The capital of each state is the headquarters of the examiners and the reports of the condition of each state bank are filed with the state authorities at the capitol, while the reports on national banks are filed in Washington, District of Columbia.

Some banks also conduct their own private examinations, while others have examinations conducted by private auditing companies, which is done usually twice a year. These examinations, whether by national, state, or private examiners, are conducted along the same lines, and the same system is always employed. No notice is given to any bank when the examinations are to be conducted.

The examination of a bank usually starts a few minutes after the bank's closing time, when the paying and receiving

tellers are about to count up cash and strike a daily balance. Three or four examiners take immediate charge of all the cash in the tellers' cages, count the cash, and strike the daily balance for the tellers, which must agree with the tellers' balance shown by the proof book. The tellers must stay in their respective cages until the examiners count their cash and strike a balance.

In larger banks, so as to avoid the possibility of changing cash by one teller to another, the examiners usually start at both ends of the row of tellers' cages and work toward the middle cage. The total amount of each teller's cash is noted on the examination sheet, and after the cash in the vault is counted, the total of all cash must agree with the amount carried on the general ledger under the heading of cash on hand. The next step is to take charge of the credit, or note, department. An adding-machine list is immediately taken off of the promissory notes and another of the collateral notes. These amounts are then checked back and must agree with the amount charged up against the note department on the general ledger. All notes are then carefully scrutinized by the examiners in regard to form, signature, and indorsements of each note and memorandum is made of all collateral held as security on the collateral loan notes. The value of all the collateral carried is later checked up to see that the market value of the securities is sufficient to warrant the loan.

The proof book is checked up next, and the amount of the exchanges, and foreign and correspondent items or checks, are totaled up and compared with the amount carried on the proof book. The general proof of the proof book is then checked up. The examination of the individual, or Boston, ledgers and general ledgers are next taken in order. The bookkeepers must balance their books as of the balance of the date that the examiners start the examination, as these books are gone over a day or two after the date that the examination begins. The extensions of each account in the individual ledger are gone over, the footings of the pages are verified, and each ledger is checked up and rebalanced.

If the savings ledger accounts are kept separate, the items of each account are run off on sheets on the adding machine

and the totals are compared with those carried on the general ledger. The totals of all the different departments of the bank are compiled and this total must agree with the amount carried on the general ledger.

The general ledger is the last book of the bank to be examined; each heading carried is gone over and checked up. The time required to examine a bank varies according to the size of the bank. The averaged-sized bank takes about 3 days, while the larger banks take from 1 to 2 weeks.

OPERATING ON THE NEW YORK STOCK EXCHANGE

DETAILS OF BUYING AND SELLING

EARLY HISTORY OF EXCHANGE SYSTEMS

1. Introduction.—In order to obtain a clear idea of the why and the wherefore of the organization known as the New York Stock Exchange, it is necessary to go back in history and trace the evolution of the exchange.

2. Beginnings of the English Stock Exchanges. One of the earliest records of a stock exchange as such, dates back to about the year 1600, when the East India Company was incorporated, and later, the Hudson's Bay Company. These companies were stock companies and their shares were traded in about the latter part of the 17th century. At this time, the stock market may be said to have been unorganized, and in the year 1697 the English Parliament promulgated a law checking the evils arising from speculation in the securities of the large number of stock companies then existing. This same law also provided for the licensing of the stock brokers.

3. Beginnings of the French Stock Market.—At about the same time that stock trading developed in England, a stock market began to function in Quincompoix Street in Paris. Here, as in England, active trading took place.

4. Earliest Panic.—Growing out of these early operations, a period of feverish speculation resulted, and in 1720 the

collapse of the South Sea Company, in England, and the Mississippi Company, in France, caused the first great panic known to the stock market.

5. Formation of the London Stock Exchange.—On July 5, 1773, the London Stock Exchange was founded. This organization may be said to have grown out of the operations of the *curb brokers*—that is, brokers who met on the curbstone—in Change Alley in London.

6. Beginnings of the Stock Market in New York. Along about the year 1800 a period of stock buying and selling began in New York. In this market the first issue of United States Government bonds, along with the shares of the United States Bank and the Bank of North America, were actively dealt in.

The usual meeting place of the brokers operating in this market was near an old buttonwood tree in Wall Street, and the stock market has continued in Wall Street or near by even to this day, so that the New York stock market and "Wall Street," or "the street," have come to be almost synonymous terms.

In May of 1792 an agreement was entered into by a number of brokers whereby it was agreed that a commission of ¼ per cent. of the specie value of the securities bought or sold should be charged. This date may be regarded as the beginning of the Stock Exchange in this country.

7. Foundation of the New York Stock Exchange. In the year 1817, the same organization of stock brokers founded in 1792 was organized into a body then known as the New York Stock Exchange Board, and in 1827 this organization moved into the Merchants Exchange building.

In 1869 this Board and the Open Board of Brokers consolidated, forming the New York Stock Exchange as it aopears today with its 1,100 members.

8. Government of the New York Stock Exchange. The New York Stock Exchange is governed by the Governing Committee, made up of the President and the Treasurer, who

are elected annually, and forty other members of the Exchange, who are elected for terms of 4 years, and classified so that ten are elected each year. Any decision by this committee is final. The forty members of this committee are so assigned that certain of them serve also on the subcommittees of the Exchange, such as the committees on arrangement, arbitration, admissions, finance, commissions, law, constitution, stock list, clearing house, and securities.

9. Membership.—A membership on the Exchange is called a *seat*. This term relates to the time when each broker had an individual seat in the Board Room, but now, owing to the high-pressure business carried on, the seats have been abolished.

The number of seats on the Exchange is limited to 1,100, and each member must be elected to membership by the body before he may have a seat transferred to him through purchasing another's privilege. As a member of the Exchange, a broker is answerable to certain laws, and under certain conditions may be expelled.

10. Value of Seats.—A seat on the Exchange is an asset of value; its price varies, often going as high as $96,000, as in 1909. To own a seat, a man must not only have money, but he must be of good business reputation and have no associations that would bring discredit upon the Exchange.

11. Expulsion.—If found guilty of fraud, any member may be expelled by a two-thirds vote.

Any member may also be expelled if he should be in any way connected with any organization in New York dealing in securities similar to those listed on the New York Stock Exchange.

12. Representation.—A member may represent only one firm on the floor of the Exchange. Any member in New York must have a place of business there where notices may be sent and received.

LISTING OF SECURITIES

13. Since the transactions on the Exchange consist of the buying and selling of securities, which may be either stocks or bonds, explanation will here be given as to how each security is admitted for trading on the Exchange, since only securities that have been listed on the *stock list* are dealt in on the Exchange.

14. Requirements for Listing.—Before securities can be listed on the stock list of the Stock Exchange, they must be examined by the Committee on Stock List.

In order to have the Committee on Stock List consider a stock for listing, the promoter must furnish this committee with certain data. Were it a railroad, the following data would be required:

1. Location of the property.
2. Description of the property.
3. A map of the property.
4. Name of the company.
5. Date of organization and by what authority.
6. Route.
7. Portion of the road completed and in operation.
8. Proposed extension.
9. Equipment.
10. Liabilities and assets statement.
11. Earnings.
12. Statement of indebtedness.
13. Number of shares of capital stock issued and the par value.
14. A list of officers and directors.
15. Location of the office of the company.
16. Location of a transfer office and registrar in New York City.

In every case the data required by the committee contain all the necessary details regarding the security that it is desired to have listed.

To sum the matter up, the corporation whose securities are about to be listed is rigidly examined by the Committee on Stock List before its securities and their listing will be considered by the Governing Committee. This latter committee makes its investigation from the data provided as to capital, resources, liabilities, number of shares outstanding, etc. This committee and the previous committee having both passed favorably upon the security, the security is then listed for trading on the Exchange.

15. Value of Listing.—Since a security is subject to such careful scrutiny by the Stock Exchange through its designated committees, listing should add a feeling of faith and security regarding its value.

16. Special Rights of Committee on Stock List. Under the ruling of the Exchange, the Committee on Stock List may place on the list any national, state, or city government's bonds, without the consenting action of the Governing Committee.

17. Listed and Unlisted Securities.—Previous to 1910 there were two kinds of securities dealt in on the Exchange, namely, listed and unlisted. The listed securities have just been explained, so it is only necessary to state that the unlisted securities were those not having been passed on and scrutinized by the Committee on Stock List and the Governing Committee. At the present time the unlisted-securities department on the Exchange has been abolished.

18. Clearing House and Ex-Clearing House Stocks.—According to the custom in the "street," sooner or later a stock listed on the Exchange may be what is called an *active stock* and the buying or selling of it becomes voluminous. When this condition becomes true, it will be referred to the Committee on Stock List, and if they so decide it will become a *Clearing House stock,* and all trades in that security would be *cleared* through the operation of the Clearing House for the New York Stock Exchange. Stocks not so listed are known as *Ex-Clearing House stocks.*

OPERATORS ON THE EXCHANGE

19. Classes of Members.—The 1,100 members in the Exchange are divided into the following groups:

Principals: A principal is a member of the Exchange who does no buying or selling for himself, but one who employs another broker to buy and sell for him.

Two-Dollar Brokers: These are brokers who operate as brokers for brokers and charge a commission of $2 per 100 shares of stock for every 100 shares bought or sold by them. For example, suppose that Broker A buys 100 shares of stock for Broker B; then, Broker A would charge Broker B $2 commission for having executed his order for him.

Room Traders: These are men who are present on the floor of the Exchange, and buy or sell securities for their own account. They are professional speculators, who, being always present on the floor, are able to take every advantage of an opening to buy and sell securities and take a profit.

Specialists: Specialists are men who make a specialty of buying and selling two or three securities, which are usually securities of an investment class, and their business is to a large extent with other brokers.

20. Commissions Charged.—When a broker buys or sells stock for a customer he is allowed a commission of

(*a*) $7.50 per 100 shares on stock with a par value up to $10;

(*b*) $15.00 per 100 shares on stock with a par value from $10 to $125;

(*c*) $20.00 per 100 shares on stock with a par value of $125 or over;

(*d*) A minimum commission of $1.00 on all transactions.

However, should the customer be a member of the Exchange, and a principal, then the broker would collect $\frac{1}{50}$ per cent. if the name of the principal were given; were it not given, then the broker would charge $\frac{1}{32}$ per cent. of the market price.

Any violations of the commission law are punishable by suspension for from 1 to 5 years; for the second offense the penalty is expulsion.

TRADING ON THE EXCHANGE

21. Opening.—On every business day the Exchange is opened at 9:30 A. M., and at 10:00 A. M. sharp the chairman announces the opening of the market; buying and selling then begin. The Exchange remains open until 3:00 P. M. on every business day except Saturday, when it closes at 12:00 o'clock noon. Thus it is seen that 5 hours are provided for the active buying and selling of securities. Should a broker do business with another, either in the Exchange or publicly outside, before 10:00 A. M. or after 3:00 P. M., a fine of $50 is levied.

Naturally, when the market is just opened by the chairman there is great noise and hubbub and the babbling of voices to be heard; brokers are running here and there attempting to execute the orders which have accumulated overnight. As one stands in the gallery and watches this activity every little while he will see a man emerge from the crowd around a post and make a note on a small pad, and if the spectator should be curious and ask the meaning of the procedure he would be informed that the man was noting the data of a transaction just closed.

22. Manner of Trading.—In rows, all about the large room where the buying and selling is carried on, there are posts erected, and on these posts are recorded the names of securities that can be bought or sold at that place. So it is seen that each stock has its own place on the floor, where buying or selling takes place.

Therefore, should a broker have an order to buy 100 shares of United States steel at the market price, he would go to the U. S. Steel post, and cry out how much stock he wanted to buy, and the price he wanted to pay. The other brokers round about make their offerings, say one at the price of 105½, another at 105¼, and so on, and the trade would be arranged. There are no written contracts exchanged. All that is necessary to close a transaction is a simple word "taken" or "sold." Whenever a broker makes a sale or a purchase he merely makes an entry on a small pad, showing the name of the broker

to whom he sold or from whom he bought the security, along with the price paid and kind of stock, together with the character of the bid or offer. An example is given in Fig. 1. The data as there recorded means, Bought, 900 shares of U. S. Steel at $149⅛ a share, from H. I. Smith and Co., and the broker's initials are signed to show who executed the order.

23. Character of Bids and Offers.—Under the laws of the New York Stock Exchange, bids and offers may be made on the following terms:

(*a*) *For Cash:* The security to be delivered on the day of sale and payment made for it.

(*b*) *Regular Way:* The security to be delivered on the next business day and payment received therefor.

(*c*) *At 3 Days:* The security to be delivered on the third day after making the contract.

(*d*) *Buyer's or Seller's Options:* Security to be deliverable not sooner than the fourth day after the contract, nor later

B/900 U. S. Steel

149⅛

H. I. SMITH & CO.

W. A. F.

FIG. 1

than 60 days. On these transactions written contracts are exchanged, which draw interest at an agreed rate from the date of the contract till the date of delivery of the security. Some do not carry interest, and are known as being "flat."

Under these Buyer's or Seller's Options, the seller has the right to make a delivery, or the buyer has a right to demand delivery at any time within the stipulated time by giving one day's notice.

24. Fictitious Sales.—Under the rules of the Exchange, a broker who takes part in a fictitious sale on the floor of the Exchange is punishable by suspension for a period of time up to one year. Thus, should a broker make a fictitious sale to another broker, the parties so engaged are punishable. The Exchange rules that all sales shall be *bona fide;* that is, in good faith.

25. Telephoning Orders From the Office to Exchange.—Every firm having a membership on the Exchange has a telephone booth on the floor of the Exchange, these booths being located at one side of the floor.

Orders for purchase or sale of securities are telephoned from the broker's office to the firm's booth, where they are received by a clerk in the firm's employ and conveyed to the *floor broker* of that firm, who executes them. When an order has been executed, the floor broker gives the details to the telephone clerk, who then telephones the result to the broker's office.

26. Short Sales.—A *short sale* on the Exchange is a sale in which the broker's customer, or person selling, sells something of value which he does not own. For example, suppose the customer does not own 100 shares of United States Steel, but gives his order to the broker to sell 100 U. S. Steel; that would be a short sale by the customer, to the extent of 100 shares of U. S. Steel.

The question now is, Where does the broker get the security to make a delivery for the seller?

The answer is, he borrows that 100 shares of stock from some other broker. When the seller's broker borrows the stock he immediately gives the other broker a check for its full market value, and the broker lending the stock pays to the seller's broker interest on the amount of the check at an agreed rate. The reason that the broker who is lending the stock pays interest on the money paid him by the borrowing broker, is that the lending broker has the use of increased capital, just as if he had borrowed it at the bank; therefore he pays interest for its use. In the long run, the transaction is resolved

down to a loan of capital by one broker to another on collateral, and the rule for interest applies. The term *collateral* means stocks or bonds deposited as security for loans. Securities so deposited are said to be *hypothecated.*

It is readily seen that by lending stock in the street to another broker, a broker may obtain the use of more capital than if he had made a loan at the bank and deposited his stock as collateral, for in the case of loans to other brokers he obtains the full market value, whereas at the bank he obtains not more than 80 per cent. of its market value.

Another advantage is that when a broker loans stock to another broker, he can demand its return at any time after one day's notice, whereas at the bank he would have to make a substitution in his collateral or else repay his loan to the bank.

Because of these facts, there are many lenders of stock, for by so lending they are able to obtain the use of capital to the full market value of the security, and at a lower rate of interest than at the bank.

27. Reason for Short Sales.—An operator will sell short when he believes that the market price of a security is too high and that a decline in price is due. He does this with the hope that by the time when he must make delivery or return it to the lending broker he may be able to buy in the security at a lower price than that for which it was sold; if his judgment is correct he will make a profit.

Because selling short indicates a belief on the part of the seller that the price will decline, operators often sell short to influence the market and thus bring about a decline by which they may profit.

28. Handling of Stock Loans.—Since the lending of stock includes the delivery of a stock certificate by the lending broker to the borrowing broker, and the payment of cash by the borrowing broker to the lending broker, it is readily seen that this operation has all the elements of a sale. So, under the rules of the Exchange, *stock loans* are treated as sales; the

necessary comparisons and the delivery of stock and cash are made just as with any other sale.

29. Arbitrage.—Arbitrage is that operation of buying in the London stock market and selling short in the New York market or vice versa, and making a profit. By this operation a broker, through his agent in London, may buy a security at a lower price than the price of that security in the New York market. He then sells that security short in the New York market and by so doing he has taken a profit from the operation.

30. Reports of Brokers.—When a broker has executed a customer's order on the floor of the Exchange, the broker telephones the result back to his own office, giving all the data, and then by means of the Exchange tickets of the Clearing House system as operating in the "street," his office compares the data, as recorded, with that of the office of the other broker who was a party to the transaction. In this way the data are checked up and error is reduced to the minimum. This method of comparison only holds good for Clearing House stocks.

With Ex-Clearing House stocks, comparisons are made by each broker submitting a memorandum of the transaction to the other broker by means of a clerk called a *runner,* whose duty it is to carry these memoranda to the other brokers' offices, have them verified, and return them to his own office.

In every case these reports are compared by not later than 4:00 P. M.

31. Time of Delivery.—Under the rules of the Stock Exchange it is provided that if a security is sold for cash it shall be delivered before 2:15 P. M. of the same day. If sold in the "regular way" then it must be delivered by not later than 2:15 P. M. of the following day.

32. Failure to Deliver.—If a broker fails to deliver a security by 2:15 P. M. of the day due, then the buying broker may close it out "under the rule." To do this, the buying broker immediately notifies the Chairman of the Exchange, who will read the notice from the rostrum the following day, and proceed to buy that security in for the broker. Should the

price be greater than the original contract price, then the buying broker has a claim against the seller, under the original contract, for the difference. For example, should Broker A fail to deliver 100 shares of stock to Broker B, then Broker B would notify the Chairman of the Exchange, who would then proceed to announce the notice from the rostrum, and then buy in that 100 shares of stock at the best price obtainable. If it was bought in at $91 per share, and the original contract price was $90 a share, then Broker B would have a claim against Broker A for $100, which is the difference.

33. Transfers.—As every stock certificate issued by a stock company to a stockholder bears the name of that stockholder, it is necessary that when a certificate changes hands it shall be transferred from the name of the previous owner to that of the new owner on the records of the stock company issuing the stock certificate, and that a new certificate be issued to the new holder.

For this reason the usual certificate of stock has a form on the back of it which may be filled out to assign it to the new owner, and then the new owner may take the certificate to the transfer office and have it transferred to his name.

34. Collection of Dividends.—Since dividends will only be paid to the recorded holders of stock, as shown on the stock company's books, it is readily seen that some sales of securities will be made when the transfer books of the company are closed. Some of these sales will be *ex-dividend,* which means that the new purchaser does not have a claim on any dividend declared before the stock is transferred on the company's books. However, should the sale carry dividend the purchaser will receive a *due bill* from the seller for the dividend.

USE OF CREDIT IN THE STOCK MARKET

KINDS OF LOANS

35. Loans at the Bank.—The money and stock markets are interrelated in the following manner:

(*a*) To secure personal loans, Stock Exchange securities are deposited as collateral.

(*b*) To obtain working capital, bond houses and stock brokers engaged in the sale of investment securities make loans with banking institutions by depositing their unsold holdings as collateral for such loans.

(*c*) All speculative purchases of Stock Exchange securities are partly financed by time loans or demand loans arranged with banking institutions, and secured by these securities as collateral.

These statements clearly show the manner of obtaining a loan from a banking institution by securing that loan with a collateral deposit.

36. Certification.—Credit is also extended to brokers by the banks through the operation of a system of certification. Certification may be defined as that operation whereby a bank, through the signature of its cashier or paying teller on the face of the check, guarantees that the signature of the drawer of the check is correct as well as that the bank will pay the amount of the check on its presentation.

By means of *certification,* credit is extended to the broker over and above that broker's deposit in the bank. An example will be here discussed:

Suppose that Broker Jones has on deposit a balance of $75,000. Broker Jones buys securities for his customers to the amount of $400,000. It is clearly seen that the broker's available capital is insufficient to pay for the securities thus bought, so the bank, having previously investigated the broker and established his line of credit, will certify the broker's checks for the amount sufficient to pay for the securities. This certifying of a broker's check for more than his bank balance is

known as *over certification.* From this example it is clearly seen that the operation of certification is in reality a temporary loan to the broker by the bank, and upon closer examination it is readily seen that very little risk is taken in connection with the operation in connection with Stock Exchange transactions.

In order to have the resulting benefits attached to *over certification* or *temporary loans,* it is necessary for the broker to enter into a definite agreement with the bank as to the balance which the broker will maintain at the bank. For example, a broker may agree to maintain a daily balance of $75,000 at his bank, and on that balance the bank may agree to certify his checks up to the amount of, say, $1,000,000. It will be readily seen that should the bank certify the broker's check for the amount of $200,000, then the bank will be over certifying to the amount of $125,000, that is, they would make a temporary loan of that amount to the broker. From the discussion thus far, it will be plainly seen that a broker's credit is a most important factor. It may be well to state now that the broker is not expected to use the limit of his credit very often.

So far, we have seen how a *temporary loan* is made through the operation of certification. And now it is necessary to go into some detail regarding a broker's deposits at the bank in the repayment of this temporary loan.

By the agreement with the bank, the broker is required and expected to make his deposits to his account, as he receives the checks from the sale of other securities than those for which he has paid through the medium of the temporary loan from the bank. Thus, should the broker deliver securities, for which he would receive other certified checks, then under his agreement with the bank he would be expected to deposit them to his account at the bank.

When the broker has received his stock, for which he has paid through the certification of his checks at the bank, he proceeds to arrange for his loans of cash on them as explained in paragraph (*c*) of Art. **35.**

37. Morning Loans at the Bank.—It has become customary of late for some of the banks to make what are

called *morning loans* to a broker for an amount sufficient to cover the probable amount of certification necessary for that day. This custom has come about through the desire to do away with the seeming violation of the National Banking Law, which stipulates that it shall be unlawful for a national banking institution, or its representative, to certify a check for an amount in excess of the amount on deposit to the credit of the maker.

38. Loans Made in the Exchange.—As has been previously explained, there is a place in the Exchange Board Room where money loans are arranged, and each loan so arranged is secured by securities deposited as collateral.

At this place the *money brokers* arrange to lend money to the brokers who may need it. These loans are usually *call loans* and carry interest at the *call rate,* which fluctuates from day to day, sometimes higher, sometimes lower. These money brokers, who make it their business to lend money, are members of the Exchange, and among them are representatives of the banks.

39. Interest Rates on Loans.—A *time loan* is a loan that is made to extend over a specified length of time, as, for example, 30, 60, or 90 days, and carries interest at an agreed rate.

A *demand,* or *call,* loan is a loan that is made with the understanding that it is subject to call at any time, usually the following day, and that it shall carry interest at an agreed rate.

The interest rates on demand loans vary from as low a rate as 2 per cent. to as high as (on July 9, 1919) 17 per cent. for capital loaned on industrial stocks and 15 per cent. for capital loaned on mixed collateral.

COLLATERAL FOR LOANS

40. Requirements.—As has been stated, when a loan is made to a broker, that broker deposits collateral, which may be made up of stocks and bonds, or stocks or bonds alone. When the collateral is deposited, the bank examines it carefully to find

out if each security deposited is readily salable, and if each has a constant market. To a large extent, the most desirable securities for this purpose are government bonds or stock and bonds of railroad companies, which are listed as of high standing on the exchange. Very often a bank will refuse to make a loan that is secured only by industrial stocks as collateral unless an increased rate of interest be charged, and more often they require a certain amount of railroad securities to be included in the collateral.

When government bonds are deposited as collateral, banks will loan to the market value of the bonds, whereas with loans that have other collateral the bank will loan only about 80 per cent. of the market value of such collateral, thus giving the bank a margin of 20 per cent. on mixed collateral, and 25 per cent. is required on industrial collateral.

Naturally, should the market value of the collateral decline, then the bank will issue a call for more collateral to maintain the required margin.

41. Substitutions.—To make a substitution in collateral for a loan means to withdraw one security and in its place substitute another block of securities of equal value or more.

Thus, if a broker deposits as collateral for a loan 100 shares of Mexican Petroleum at 60 and 300 shares of Erie at 40 and later finds that he needs the 300 shares of Erie to make a delivery, he would arrange with the bank to withdraw the 300 shares of Erie and substitute in its place, say, 200 shares of New Haven at 62. Thus it is seen that the margin on the loan at the bank remains practically the same as before.

42. Legality of Hypothecation of Customer's Securities.—No doubt the reader is wondering whether it is lawful for a broker to hypothecate the securities of a customer when they are held on margin.

As has been seen, the customer only has an equity in the securities held for his account to the amount of his credit balance as shown by his account. Therefore, if the broker still retains securities for that customer in his office to the extent of that customer's equity, then the broker is within the law.

This is the plan followed in the street by many firms operating as brokers.

On the other hand many firms have an agreement with their customers to the effect that the securities held for any customer may be used as collateral for a loan at the bank or elsewhere.

CLASSES OF STOCK

43. Grouping.—The stocks of corporations may be said to be in either one of the classes enumerated below.

(*a*) *Railroads:* Stocks of railroad corporations.

(*b*) *Mining:* Stocks of mining corporations.

(*c*) *Industrials:* Stocks of industrial corporations.

44. Stock Certificates.—Certificates of stock are pieces of tough paper on which is engraved the name of the corporation, kind of stock, and number of shares the certificate represents, and they are signed by the president and the treasurer of the corporation. It is specified on each certificate that the person whose name appears on its face is the owner of that certificate; also that the shares are transferable only on the books of the corporation. On the back is a printed blank form for indorsement to a new owner, in the case of a sale, giving the new owner power of attorney for the transfer of the stock to his name.

45. Kinds of Stocks.—In the organization of a corporation, stock may be issued under the name of *preferred stock* and *common stock,* and each has the following rights.

Preferred stock is stock that bears a fixed rate of dividend, which must be paid before any dividend is payable on the common stock. The dividend may be *cumulative* or *non-cumulative*. Should it be cumulative, then whatever dividend is not paid this year must be paid out of future profits before the common-stock holders will have any claim for dividend. At all times this guaranteed dividend will be accumulating till paid. From this it will be seen that the preferred stock is the investment stock held for revenue from dividends, while the *common stock* is the speculative stock.

46. Bonds.—There are many forms of bonds issued, but in every case a bond represents a lien, or mortgage, on some part or all the property of the company that issues the bonds. Some of these bonds are known as *consolidated bonds,* which are bonds issued, after a reorganization, in place of previous bond issues. When a consolidated-bond issue is made it consolidates the previous bond issues under one bond issue, which covers all previous ones.

There may be *convertible bonds* issued, and they usually are bonds which are convertible into stock.

Then again, should one corporation buy control of another, a series of bonds might be issued, called *collateral bonds.* In this case they would be secured by the bonds of that corporation controlled.

Further, should a corporation issue bonds and record the names of the holders of them, then these bonds would be known as *registered bonds.*

Another form of bond is called a *coupon bond.* This is a bond with coupons attached on which the interest due at certain dates is stated, and, as these coupons come due, interest is collected by clipping off the coupon due and presenting it for collection. A good example is the Liberty coupon bond.

In every case it is to be remembered that a bond constitutes a mortgage, or lien.

WALL STREET'S INSTRUMENTS

47. The Ticker.—On entering a broker's office, practically the first thing to be noticed is the *ticker* as it is called. This is an instrument that automatically prints on a *tape* (a

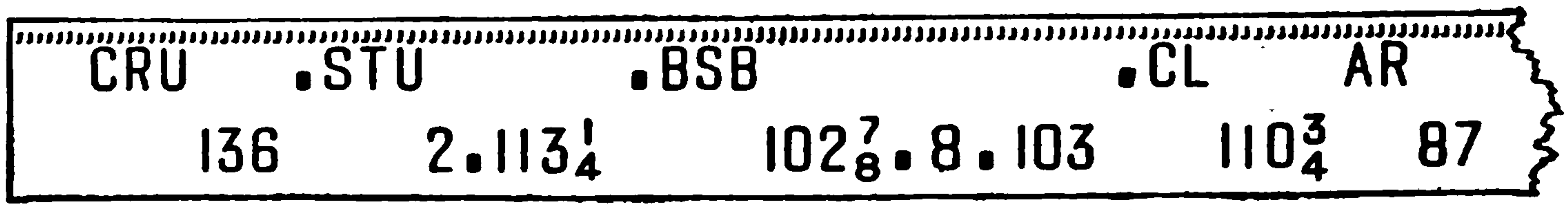


FIG. 2

long roll of paper about $\frac{5}{8}$ inch wide) the prices at which blocks of securities were sold on the Exchange.

The data regarding the sales on the Exchange are gathered by reporters for the New York Quotation Company, who

report this information to their office, and it is then sent out over the wires to the places where these tickers, or stock indicators, are set up, and the machine automatically prints the data in the form shown in Fig. 2. The data as there printed, read from left to right, mean:

100 Crucible Steel was sold at a price of \$136 per share;
2 shares Studebaker was sold at \$113$\frac{1}{4}$ per share;
100 Bethlehem Steel "B" was sold at \$102$\frac{7}{8}$ and 8 shares at \$103;
100 Central Leather was sold at \$110$\frac{3}{4}$ per share;
100 Smelters was sold at \$87 per share.

It should be understood that every stock listed on the Exchange has an abbreviation, and for the purpose of illustration a few of them are here given.

Abbreviation	Name of Stock
A. K.	Alaska Gold Mines
A. R.	American Smelting and Refining Co., or "Smelters"
B. S. B.	Bethlehem Steel, Series "B"
Anc.	Anaconda Copper
B. R. T.	Brooklyn Rapid Transit
Mnp.	Mexican Petroleum
Aco.	American Cotton Oil
Rbc.	Republic Steel
Pa.	Pennsylvania R. R.

Pr. means preferred stock; X means ex-dividend; U. R. means under the rule.

48. Clearing House Price as Shown on the Ticker. Every day, just as soon as the last sale is recorded, the *Clearing House prices* are made up and sent out over the tape to the offices of the brokers. That price is the nearest whole number to the last sale price. For example, should Anaconda Copper's latest sale price be 79$\frac{3}{4}$, then the Clearing House price would be 80, because 79$\frac{3}{4}$ is nearest the whole number 80, so that price of 80 stands as the Clearing House price.

However, the official Clearing House prices are compiled by a clerk who goes from the Clearing House to the board room

and compiles them. He then checks his prices as made up with those as appearing on the ticker tape. Should a difference in the prices be noted, then the brokers are notified of the error appearing on the tape. A further discussion of the use of the Clearing House prices will be given later.

49. Telephones.—Next to the ticker, the most important instrument used in relation to the operation of the New York Stock Exchange is the telephone. As has been explained, the telephone is used in transmitting the orders of the customers to buy or sell, from the office to the Exchange, and then, when that order has been executed, the data of that transaction are returned to the broker's office. When one considers that in one day alone the transactions on the Exchange may run as high as 2,000,000 shares or over, it is readily seen that without the telephone the Wall Street system would be badly slowed up.

50. Telegraph and Cable Systems.—The telegraph and cable systems are of use in conducting out-of-town business on other exchanges.

51. News Slips.—In Wall Street there are two news agencies, one of which is Dow, Jones Co., and the other is the New York News Bureau. These agencies provide news items in the form of news slips every few minutes. These news slips contain important news as to recent developments which might have a tendency to affect the market. These slips are delivered to subscribers' offices by special messenger.

52. News Ticker.—The news ticker operates in a manner similar to the ticker already described, only instead of printing a series of stock transactions in abbreviation on a narrow slip of paper, it prints a page on a sheet of roll paper about 6 inches wide, and provides a series of news reports on the condition of the market and of the happenings throughout the world.

LANGUAGE OF THE STREET

53. Meanings of Terms.—Wall Street has a distinct vernacular all its own. To understand it, one must mix in the life there and learn it. Some of the more common terms are here explained.

A **bull** is one who is *long of the market,* one who is holding securities and expects the market to rise.

A **bear** is a *short seller,* one who is *short of the market,* and who is trying to force the market down by selling short.

To **straddle the market** is to *hedge* one's account; that is, to be long of the market on certain securities and short in others.

A **lamb** is a person inexperienced in the stock market. When he sustains a loss he is said to have been *sheared.*

Margin is the deposit required by a broker when a customer gives him an order to buy securities or to sell them short. Usually 20 per cent. of the amount of money involved in the transaction is required. The amount by which the market value of securities hypothecated exceeds the amount loaned on them is also called the margin.

The persons operating in the stock market are called bankers, brokers, principals, investors, manipulators, speculators, professionals, lambs, plungers, room traders, bulls, bears, specialists, cliques, pools, syndicates, and the like.

When the market prices of securities change but little the market is called *steady.* The market may take on other aspects so that it is called *weak, active,* or *inactive;* it might be in *boom* or a *panic,* and the prices shown are said to rise or fall, advance or decline.

A **strong market** is one that shows substantial gains in price. It is *weak* when the prices decline. It is said to be *stagnant* when the volume of sales is low.

A **pool** is a group of operators who advance a contribution to a common fund for the purchase of certain stocks, and when the pool sells out each one takes his proportionate share of profit or loss. A **blind pool** is one in which no one but the one managing it knows what stock is being dealt in.

An operation known as **pyramiding** is the act of buying other securities from the fictitious profits of an initial investment. Thus, a man makes an initial investment on a small margin in a *rising market,* or a *bull market.* Prices advance, but instead of selling and taking his profit he still holds the investment on the original margin and the broker accepts the profit as shown on his books in lieu of cash to buy more securities on margin. Such profits are called *fictitious,* or *paper, profits,* and the man is said to be *pyramiding* his holdings. This pyramid is very likely to be upset by a decline in the market and the investor will then sustain loss.

A **wash sale** is a fictitious sale for the purpose of creating a fictitious market price.

RECORDING A PURCHASE AND SALE

54. The Broker.—As will be seen from the discussion thus far, the broker may be regarded as the middleman, or the one situated directly between the buyer and the seller. He is the one who negotiates as agent for either the buyer or seller.

New York, July 2, 19

John Doe & Co.

Buy for my account and risk

200 U. S. Steel at the market

H. Appel

Fig. 3

Therefore it can be seen that a man of business ability is required to occupy this position. It must necessarily be so, for his advice on conditions in the market and recommendations to customers are of vital importance.

Mr. Appel

WE HAVE THIS DAY Bot **FOR YOUR ACCOUNT AND RISK:**

BONDS OR SHARES	SECURITY	PRICE	COMMISSION	INTEREST	FEDERAL AND STATE TAX	NET	NAME
200	U S Steel	98	$ 30		$	$ 19,630	W. N. Jones & Co.

SETTLEMENT OF ALL TRANSACTIONS TO BE IN NEW YORK FUNDS.

It is agreed between broker and consumer:

1. That all transactions are subject to the rules and customs of the New York Stock Exchange and its Clearing House.
2. That all securities from time to time carried in the customer's marginal account, or deposited to protect the same, may be loaned by the broker, or may be pledged by him either separately or together with other securities, either for the sum due thereon, or for a greater sum, all without further notice to the customer.

FRANK MORAN CO.

PER ________________

FIG. 4

55. The Order to Buy or Sell.—Next to be considered are the operations in the broker's office when a customer gives an order. The customer makes out an order in some such form as shown in Fig. 3.

The order is telephoned to the exchange and there executed, the data returned to the office, and a notice as shown in Fig. 4 is given to the customer.

As shown thereon, the customer is notified to the effect that the Frank Moran Company has bought for his account and risk 200 U. S. Steel at the price of $98 per share, and that a

New York, July 2, 19

John Doe & Co.

Sell for my account and risk
100 Smelters at 93

H. Appel

FIG. 5

commission of $30 has been charged, making the net price paid by Mr. Appel $19,630. The broker from whom the security was bought was W. H. Jones & Co.

When the order was given it was entered in the Customers' Order Book, when executed it was entered in the Purchase and Sales Book, then into the blotter, and from the blotter it was posted to that customer's ledger account, which was debited for the net amount as shown on the notice.

Should Mr. Appel give an order to sell, it would be given as shown in Fig. 5.

As before, the order is telephoned to the Exchange, executed, and then the data telephoned back to the office, and a notice is given Mr. Appel to the effect that his order was executed.

The notice is given in the same form as that shown in Fig. 4, and in this case is filled out to read: We have this day *sold* for your account and risk, Shares *100;* Securities, *Smelters;* Price, *$93;* Federal and State Tax, *$4;* Net, *$9,281;* Name of Broker, *T. O'Keefe & Co.* The net price received is made up of the market price received less commission charges and transfer tax to the state and federal governments; because these are charges which the customer must pay, therefore they are deducted.

As in the case of the purchase previously described, the entries are made in the several records there mentioned and the customer's account is credited with the amount noted in the net column.

The manner of handling each and every record used in the broker's office will be taken up in a later Section.

THE CURB MARKET

56. Beginning of the Curb Market.—As has been previously explained, the stock brokerage business first began to function on the curb stones of the streets of Paris and London. Later on, the curb market began to function in New York under an old buttonwood tree near 68 Wall Street. Securities were bought and sold at this place in New York until about the time of the Civil War, when the market was removed to William Street, between Exchange Place and Beaver Street. Trading in this market, just as in London and Paris, began at an early hour and continued until 6:00 P. M. on the curb, and later in the hotel lobbies.

57. The Curb Association.—During the interval of time as described above, the curb market might be termed unorganized. However, in 1910, the New York Curb Association was formed through the efforts of a few men who were far-sighted enough to see the benefits accruing from an organization.

There are two hundred and fifty members of this association and the dues of each member are $100 per year.

Under the existing laws of the association, the trading on the curb is not restricted to the members only, but it is open to all who choose to trade there.

58. The Market Place.—The present meeting place for the curb market is on Broad Street in front of the Wall Street Journal building.

59. Business Hours.—Just as on the Exchange, the business hours extend from 10:00 A. M. till 3:00 P. M. During this time the firms who trade on the curb keep a representative there, whose duty it is to execute the customers' orders in the open market. The manner of trading is similar to that on the Exchange. The buyer finds the seller, a trade is arranged, the order is executed, and the data returned to the office.

The broker notifies his office of the trades put through, by means of telephones located in booths situated in the windows overlooking the curb market. When an order is received from a customer, the broker's office notifies the telephone clerk in this booth; he, in turn, notifies the curb broker by means of a sign language, or signals, similar to those used by deaf and dumb persons. The broker executes the order and by signs notifies the telephone clerk, who notifies the office.

60. Method of Accounting.—The method of accounting is similar to that employed for recording Stock Exchange transactions and will be explained in *Stock Brokerage Accounting Methods*.

61. Securities Dealt in.—The securities traded in on the curb are those that have not as yet been admitted to the Exchange for trading; and, accordingly, most Stock Exchange houses maintain representatives on the curb.

In spite of the fact that the securities there dealt in are not listed on the Exchange, there are many important issues dealt in on curb. For example, up until July, 1919, the stocks of the Standard Oil companies were traded in wholly on the curb. In 1919, application was made to list certain of the securities of that company on the Exchange.

From this brief discussion it will be seen that the curb market plays an important part in the financing of new stock companies, for, as has been explained, the security of a new corporation is first dealt in on the curb market, and the security will continue to be bought and sold there, by the public and others, until it is listed on the Exchange.

STOCK-BROKERAGE ACCOUNTING METHODS

BOOKS AND METHODS USED

INTRODUCTION

1. As has been explained in the previous Section, the transactions resulting from the buying and selling of securities by a broker for his customers are numerous. For this reason a system of books of account has come into use in brokers' offices for recording all necessary data regarding any single transaction, such as the kind of security bought or sold, the quantity (number of shares) bought or sold, the price, for whose account, from whom bought, to whom sold, and many other important facts, which will here be taken up and explained in detail.

The books of account commonly used in a broker's office in Wall Street are as follows:

1. Order Book.
2. Purchase and Sales Book.
3. Margin Record.
4. Clearing House and Ex-Clearing House Blotters
5. Customers' Ledger.
6. Private Ledger.
7. General Ledger.
8. Securities Ledger.
9. Stocks Borrowed and Loaned Book.
10. Money Borrowed and Loaned Book.

11. Stock Transfer Register.
12. Vault List.
13. Revenue Tax Register (2), required by law.

The records just mentioned are to a large extent prescribed by the laws of New York State or the Federal Government, or by the laws of the New York Stock Exchange. It may therefore be safely stated that the same system of bookkeeping is used by each broker, and each office does not follow a system of bookkeeping that is entirely a product of the bookkeeper's own selection.

The system of bookkeeping and accounting in operation in Wall Street is very efficient, for it has been created to meet the demands of that business, and is not a system forced upon it.

ORDER BOOK

2. Use.—The Order Book is a book in which the orders of the customers are recorded. As has been explained in the previous Section, when a customer gives an order to a broker to buy or sell for his account and risk, he does so in writing.

SELL ORDERS July 1 192_

	AMOUNT	SECURITY	PRICE	EXPIRES	CUSTOMER	SOLD TO
	200	Rubber	90	G.T.C.	W. A. Fordham	W. L. Foster
	10	Anaconda	85	3 da	H. Avery	C. A. Bamfield
	100	Sears Roebuck	108	July 1	H. Avery	R. C. Templeton

Fig. 1

These orders, as soon as given, are written up in the Order Book. If it is an order to sell, then it is entered under the *sell* orders side, as in Fig. 1; if it is an order to buy, it is entered under the *buy* orders side, Fig. 2.

3. What Is Recorded.—The facts recorded regarding a sell order are as follows:

1. The amount of security to be sold.
2. Name of security.
3. The price at which to sell.
4. When the order expires.
5. Name of customer giving the order.
6. Name of broker to whom sold.

4. Stop Orders.—In Wall Street, a customer very often sets a figure at which to sell certain of his holdings in case of a decline in the market price. Such an order is called a *stop order*. In the case of a stop order, if the customer tells the broker to sell a certain security when the price falls to a certain point, that price is recorded in the price column, Fig. 1. Then, should that order be good till some other order takes its place, it would be good till countermanded, and this information, represented by the abbreviation *G. T. C.*, would be recorded in the column headed Expires. Then again, a customer might give an order that is to hold for, say, 3 days; in that case, the date of expiration, *3 da.*, would be recorded in the Expires column. The name of the broker to whom the sale is made is recorded in the column headed Sold To.

In the case of a buy order, the facts recorded are the same, with the exception that the name of the broker from whom the security was bought is included in the Bought From column.

5. Example of Use.—To see just how this record is used, consider the following transactions, which are to be entered as shown in Figs. 1 and 2. Suppose that on July 1, 192—:

1. W. A. Fordham gives Broker John Jones an order to buy for his account and risk 100 shares U. S. Steel at the market price (which is $\$98\frac{7}{8}$ a share).

2. W. A. Fordham gives Broker John Jones an order to sell for his account 200 shares Rubber at $90 a share.

3. H. Aery gives Broker John Jones an order to buy for his account and risk 10 shares Studebaker at $70 per share; 100 shares Sears Roebuck at $105 per share.

4. H. Aery gives Broker John Jones an order to sell for his account 10 shares Anaconda Copper at \$85 per share, in 3 days; 100 shares Sears Roebuck at \$108 per share on July 1.

It is here assumed that these orders were executed on July 1, 192—, in order to proceed with the explanation. Just as fast as the orders to buy or sell come in, the order clerk enters them in the Order Book. Mr. Fordham's first order to buy 100 U. S. Steel at the market, which price was \$98⅞ per share, is entered in the Order Book, Fig. 2, as follows: In the Amount column is recorded the number of shares to be bought; in the Security column is recorded the name of the stock; in the Price column is recorded the price at which the purchase takes place. In the Expires column is recorded how long a

BUY ORDERS July 1 192—

	AMOUNT	SECURITY	PRICE	EXPIRES	CUSTOMER	BOUGHT FROM
	100	U S Steel	98⅞	July 1	W. A. Fordham	J. T. Lamb
	10	Studebaker	70	G.T.C.	H. Aery	H. A. Frank
	100	Sears Roebuck	106	G.T.C.	H. Aery	T. J. Delaney

FIG. 2

time the order is good for—in this case it expires very quickly—and in the Customer column is recorded the name of the customer who gives the order to buy, in this case W. A. Fordham. The making of all the entries to this point may be considered as operation No. 1.

When the order is received it is immediately telephoned to the firm's representative on the floor of the exchange. He executes the order and telephones the result back to the office. Then takes place operation No. 2, which consists of entering the name of the broker from whom the stock was bought; in this case the selling broker was J. T. Lamb. Then, since the customer ordered the security to be bought at the market price, whatever it might be, the price entry would be made in the

price column. If, however, the customer had ordered the security to be bought when the market reached a certain price, the price specified would have been entered in operation No. 1.

From this explanation, the entries of the other transactions, as shown in Figs. 1 and 2, will be easily understood.

PURCHASE AND SALES BOOK

6. Use.—The Purchase and Sales Book is a book of original entry. It is used to record all the purchases and sales of securities by a firm of brokers, for their customers after the orders are given and executed.

In this record the following facts are recorded regarding a given transaction:

1. Name of the broker who executed the order.
2. From whom bought or to whom sold.
3. Number of shares bought or sold.
4. Description of security.
5. Market price at which bought or sold.
6. For whose account bought or sold.
7. Time of delivery under terms of contract
8. The total amount paid.

7. Since there are what are known as Clearing House and Ex-Clearing House stocks, it would naturally be assumed that there were two books used, one for recording each group of items. On the contrary, there is only one Purchase and Sales Book used, but in that book all Clearing House items are usually segregated from the Ex-Clearing House items.

8. Bids and Offers.—For convenience, the provisions of laws of the New York Stock Exchange regarding bids and offers, which were given in the preceding Section, are here repeated, and details of recording of bids and offers are explained.

Under the laws of the New York Stock Exchange, bids and offers for the purchase and sale of securities may be made as follows:

1. *Cash:* Security to be delivered on the day of purchase or sale and payment made for it.

2. *Regular way:* Security to be delivered and payment to be made therefor on the next business day following the purchase or sale.

3. *At 3 days:* Security to be delivered on the third day following the contract to buy and sell.

4. *Buyer's or seller's options:* For delivery of security not sooner than the fourth day nor later than 60 days after the date of contract. Contracts are exchanged on the day following the transaction. Some of these contracts provide for interest and others do not. Where the contracts do not provide for interest they are known as "flat."

Under these buyer's and seller's options the buyer may demand delivery, or the seller has the right to deliver the securities at any time before the expiration of the option. On such contracts, one day's notice must be given at or before 2:15 P. M. on the day before the securities are deliverable prior to the maturity of the contract.

9. Abbreviations Used.—The information regarding time of delivery under the terms of the contract is recorded in the Time column by means of certain abbreviations, as follows:

1. Cash, *C*.
2. Regular way, *R*.
3. At 3 days, $B\ O^3$ or $S\ O^3$.
4. Buyer's or seller's options, $B\ O^4$ or $S\ O^{30}$.

The abbreviations for *cash* and for *regular way* explain themselves; *B O* and *S O* mean buyer's option and seller's option, respectively, and the exponent indicates the maturity of the contract. Thus, if you were selling stock and agreed to make a delivery on the third day after the date of contract, then, since you were the seller, you would hold the seller's option at 3 days, or, in abbreviation, $S\ O^3$. On the other hand, were you the buyer at 3 days, then you would hold the buyer's option at 3 days, or, in abbreviation, $B\ O^3$. If the option were for any other time, as 4 days or 30 days, it would be written as shown, $B\ O^4$ or $S\ O^{30}$, as the case might be.

PURCHASES A. DATE July 1, 192-

NAME OF BROKER	FROM WHOM BOUGHT	NUMBER OF SHARES	DESCRIPTION	PRICE	FOR WHOSE ACCOUNT	TIME	AMOUNT
F. A. Downe	J. T. Lamb	100	U. S. Steel	98 7/8	W. A. Fordham	R	9887 50
Downe	W. A. Frank	10	Studebaker	70	N. A. Avery	R	700
Downe	T. J. Delaney	100	Sears Roebuck	105	N. A. Avery	C	10500

Fig. 3

10. Example of Use.—As an example of the use of the Purchase and Sales Book, Figs. 3 and 4 show the entries resulting from the transactions noted in the Order Book, as listed in Art. **5**.

In the case of Mr. Fordham's order, for example, it will be seen that under Name of Broker is recorded the name of F. A. Downe, the broker who bought the stock; under From Whom Bought is recorded the name of J. T. Lamb, which was obtained from the Order Book, Fig. 2. Under Number of Shares is recorded the number of shares bought, in this case 100; under Description is the name of the stock, in this case U. S. Steel; under Price is the market price paid; under For Whose Account is the name of the person giving the order, in this case W. A. Fordham.

In the Time column is recorded the time

SALES **A.** **DATE** July 1, 192-

NAME OF BROKER	TO WHOM SOLD	NUMBER OF SHARES	DESCRIPTION	PRICE	FOR WHOSE ACCOUNT	TIME	AMOUNT	
F. A. Downe	W. L. Foster	200	Rubber	90	W. A. Fordham	R.	18	000
Downe	C. A. Bauerfeld	10	Anaconda	85	H. Avery	R.		850
Downe	R. C. Templeton	100	Sears Roebuck	108	H. Avery	R.	10	800

Fig. 4

when the security will be delivered under the terms of the contract. In this case the contract was made in the regular way, and that fact is recorded by the symbol *R*.

The Amount column records the total cost under terms of contract, in this case $9,887.50.

The other transactions are entered in a similar manner.

CUSTOMER'S MARGIN RECORD

11. Use.—As a customer may buy stocks and bonds on margin, it is highly important that the broker have at hand a statement of the amount of capital each customer has advanced on his purchases which the broker is holding for him. Therefore the Margin Record was introduced to fill that need.

This record is one of the most important kept in the broker's office. It is also the one most carefully watched by the broker, especially when the buying and selling of securities is very large and the market is very active.

The Margin Record is kept either on what are known as margin cards or in some loose-leaf record, the latter being usually preferred. This record shows at a glance all the information regarding a customer's account as listed below:

1. The number of shares—long, short, hedged.
2. A description of the securities held.
*3. The net price of those shares.
4. The market price paid.
5. The margin deposit (ledger credit balance).
6. The margin remaining to carry the holdings, stated either in points or percentages.

12. Marginal Requirements.—Usually the broker requires the customer to deposit 20 per cent. of the amount of money involved in a given transaction, as a margin, on all securities which that customer may have bought or sold short. Thus, if an account were long, that is, if the customer holds,

*The net price is made up of the market price plus commission charges, if a purchase; if a sale, the tax and commission charges are deducted from the market price.

say, 100 shares of stock costing $10,000, then that customer would be required to deposit as a margin with the broker the sum of $2,000. Likewise, if the customer had sold short (that is, sold securities which he did not own) a like amount of securities with a value of $10,000, he would be required to deposit a margin of $2,000 on his short sales.

It is readily seen that by means of this record the broker is better able to determine when more cash or margin must be furnished by the customer in order to still maintain his account so that the broker himself will not sustain a loss, or so that he will not be forced to sell the securities which he is holding for that customer.

13. Manner of Use.—Whenever an entry is made in the Purchase and Sales Book, a corresponding entry is made in the same customer's Margin Record. Thus, if a customer, John Jay, buys 100 shares of Anaconda Copper at $50 per share, the first entry would be made in the Order Book, then in the Purchase and Sales Book, and then immediately the entry would be made in the customer's Margin Record, showing:

1. The number of shares bought or sold short.
2. The kind of stock.
3. The market price and net price.
4. The margin of deposit (credit balance).
5. The margin remaining after making the necessary adjustments regarding any losses or gains sustained.

With this information it is an easy matter to find the margin that a customer is maintaining on his holdings at any time. All that is necessary is to find the market value of all securities held long or sold short and compute 20 per cent. of it; for, as has been stated, a margin of 20 per cent. is required by the broker.

Should the margin fall considerably below 20 per cent., then a call would be made by the broker on the customer for enough more cash or securities to *recover* (that is, to make up) the margin to the original 20 per cent. required.

14. Example of Use.—If Mr. Fordham's orders as recorded in the Purchase and Sales Book are his only trans-

actions with Broker F. A. Downe, the standing of his account as to marginal deposit would be determined by the following entries:

As the record of purchases shows that the broker is holding 100 shares of U. S. Steel for Mr. Fordham's account, Mr. Fordham is long of the market to that extent; therefore, an entry is made on the long side of his Margin Record, showing the number of shares his account is long, the kind of stock, and the net price, which is the market price plus commission charge of the broker and any additional expense. The market price paid for the security is also recorded.

In the record of sales it is found that Mr. Fordham has sold short 200 shares of Rubber, and the data regarding his short sale are therefore recorded, showing the number of shares and kind of stock short, the net price, and the market price of the stock sold short.

Since all securities held long for a customer on a margin or sold short are required to be margined by a deposit of 20 per cent. of the value involved, and since Mr. Fordham is holding $9,887.50 worth of stock on margin, he will be required to deposit 20 per cent. of it, or $1,977.50, and on the 200 shares of Rubber which he has sold short he will deposit with the broker 20 per cent. of $18,000 or $3,600, which will give him a credit balance in the ledger of $5,577.50. As Mr. Fordham goes on trading, his credit balance in the ledger will change from time to time, as will the securities held long or sold short, so the margin records are very changeable.

THE BLOTTERS

15. Use.—In the bookkeeping system the next book to be used is the *Blotter*. This record may be said to be a combination of the Cash Book and the Journal. Its ruling and arrangement are such as to indicate whether an entry for a given transaction is only to show a transfer from one account to another or whether an exchange of cash has taken place.

There are usually two blotters kept, one for entering the transactions in Clearing House stocks in *100-share lots or*

multiples thereof. This Blotter is called the Clearing House Blotter. The other blotter in use is known as the Ex-Clearing House Blotter, and it records transactions in Clearing House stocks which are of less amount than 100 shares; it is used also to record all transactions in stocks that are not Clearing House stocks, as well as to record all transactions in bonds. Each one of these blotters will be taken up in detail.

16. Alternating Blotters.—In brokers' offices there are usually two sets of blotters kept for each division of stock as explained above. They have one Clearing House Blotter known as the Monday, Wednesday, and Friday C. H. Blotter, and it records all transactions that have taken place on Tuesday, Thursday, Friday, and Saturday; also, one known as the Tuesday and Thursday C. H. Blotter, and it records all transactions in Clearing House stocks occurring on Monday and Wednesday of each week.

In the same way two Ex-Clearing House Blotters are used, on corresponding days, for recording all transactions that are Ex-Clearing House.

By means of the alternating blotters it is possible for the bookkeepers to keep the customers' accounts posted to date.

ENTRIES

17. By referring to the forms, Figs. 5 and 6, showing the ruling of each blotter, it will be plainly seen that as to ruling and arrangement the blotters are identical. So a description of the manner of making an entry in one blotter will explain the method of operating either.

When a transaction is entered in the Purchase and Sales Book, the same transaction is journalized in the Blotter. Should the transaction in question be a sale, then it would be entered on the To Deliver side of the Blotter and the following data would be recorded, namely:

1. To whom sold.
2. Number of shares sold (quantity).
3. A description of the shares sold.

4. The price paid, on the market, per share.
5. The amount paid in settlement of contract.
6. The commission charged by the broker for his services of selling.
7. Tax paid at the rate of $2.00 per hundred shares to the state of New York and also at the same rate to the Federal Government, on all stock sold with $100 par value.
8. The total amount received in settlement of each transaction, which includes the amount paid for the stock *minus* any additional expense such as commission and tax and interest.
9. The name of the account affected.

On looking back to the forms, no doubt the reader wonders where the interest items come from, which would be entered in the column marked Interest. In the Clearing House Blotter the interest items will come from interest on all borrowed and loaned Clearing House stocks which have been *called* or *returned*. So, should a broker have to borrow stock to make a delivery for a customer on a short sale or for any other reason, that broker would collect the interest coming from the transaction; for, it will be remembered that the broker borrowing the stock will give his check for the full market value of the stock borrowed, and he will receive interest on the *amount given* at an agreed rate. On the other hand, should the broker loan stock, then, instead of having an interest credit, he would have an interest debit.

In the Ex-Clearing House Blotter, interest items will arise from money borrowed and loaned as well as from borrowed and loaned stock of the Ex-Clearing House division of stock.

Should the transaction be a purchase instead of a sale, then the data recorded would be the same as that for a sale, with the exception that instead of to whom sold we would record from whom bought; also, there would be no tax item, for no tax is paid by the purchaser of securities. Interest would be included, should any be due, from money loaned or stocks returned.

18. Use of Blotter as a Cash Book.—So far, the Blotter has been considered only as it records the data regard-

To Receive July 1, 192–

From Whom Bought or Received	Quantity	Description	Price	Amount	Interest	Commission	Tax	Total Amount	Whose Account	Numbers	Folio
J. T. Lamb	100	U. S. Steel	98 7/8	9887 50		15 –		9902 50	W. A. Fordham		
						30 –	8	38	Q		
Clearing House											
Balance to Deliver	200	Rubber	CH. 99	19800 –				19800 –	Clearing House %		
				29687 50		45 –	8	29740 50			

FIG. 5 (a)

To Deliver ____________________

To Whom Sold or Delivered	Quantity	Description	Price	Amount	Interest	Commission	Tax	Total Amount	Whose Account	Numbers	Folio
W. L. Foster	200	Rubber	90	18000 –		30 –	8 –	17962 –	W. A. Fordham		
						15 –					
								4	Federal Tax a/c		
								4	N.Y. State Tax a/c		
								45 –	Commission a/c		
Clearing House								38 –	O		
			CH.								
Blance & Braun	100	U.S. Steel	99	9900 –				9900 –	Clearing House a/c		
Cash to balance				1787 50				1787 50			
				29687 50		45 –	8 –	29740 50			

Fig. 5 (*b*)

To Receive *July 1, 192–*

From Whom Bought or Received	Quantity	Description	Price	Amount	Interest	Com-mission	Tax	Total Amount	Whose Account	Numbers	Folio
H. A. Frank	10	Studebaker	70	700 –		1 50		701 50	H. Avery		
T. J. Delaney	100	Sears Roebuck	105	10500 –		15 –		10515 –	H. Avery		
						16 50	4 40	20 90	O		
		Balance		96027 50				96027 50	Seaboard Nat'l Bank		
				107227 50		33	4 40	107264 90			

FIG. 6 (*a*)

To Deliver July 1, 192–

To Whom Sold or Delivered	Quantity	Description	Price	Amount	Interest	Commission*	Tax	Total Amount	Whose Account	Numbers	Folio
		Balance		90000 –				90000	Seaboard Nat'l Bank		
R. A. Benefield	10	Anaconda	85	850 –		1 50	40	848 10	H. Avery		
R. C. Templeton	100	Sears Roebuck	108	10800 –		15 –	4	10781 –	H. Avery		
		Cash		5577 50				5577 50	W. A. Fordham		
								20 90	0		
						16 50					
								2 20	Federal Tax a/c		
								2 20	N. Y. State Tax a/c		
								33 –	Commission a/c		
				107227 50		33 –	4 40	107264 90			

Fig. 6 (b)

ing transactions in securities. It will now be considered as it records cash.

Rule.—*Should cash be received, it is recorded on the Deliver side of the Blotter, while if cash be paid, it is recorded on the Receive side of the Blotter.*

The explanation of this seeming error is that the custom in the street has established the fact that all sales and the cash received therefor shall be recorded on the Deliver side, the credit in this case being a credit to the customer and a debit to cash.

Also, custom has established that when a purchase is made and paid for in cash, it is to be recorded on the Receive page of the Blotter, the debit being a debit to the customer and a credit to cash.

19. Posting to the Ledgers.—All posting to the ledger accounts is done from the Blotter, and in posting the following rule should be followed:

Rule.—*When posting to the ledger account from the Blotter, should an item appear on the right-hand, or Deliver, page, it represents a credit to the customer and a debit to cash. Should the item appear on the left-hand, or Receive, page, it represents a credit to the cash account and a debit to the customer.*

20. Ex-Clearing House Blotter.—On each morning the bank balances from the previous day are entered in the Ex-Clearing House Blotter on the Deliver side of that record. At the same time the balances of stock from the Clearing House Blotter of the previous day are entered on their respective sides. Thus, a Clearing House stock balance to receive would be entered on the Receive side of the Ex-Blotter, as it is often called, while a balance to deliver would be entered on the Deliver side of the Ex-Blotter. Also, should a draft have been submitted to the Clearing House, it would appear on the Deliver side of the Ex-Blotter; likewise, a check would appear on the Receive side of the Ex-Blotter.

21. Example of Entries in Blotter.—A transaction having been executed, a copy of that transaction goes to the

blotter clerk, who proceeds to journalize it in either the Clearing House or the Ex-Clearing House Blotter, as the case may be. Let us assume the position of the blotter clerk and journalize the transactions that were shown in the Purchase and Sales Book.

Going over the sales, we pick out the items in 100-share lots of Clearing House stock and enter them on the Deliver side of the Clearing House Blotter, giving the data as shown in Fig. 5.

We enter the items of transactions in Ex-Clearing House stock in the Ex-Clearing House Blotter, recording the data as shown in Fig. 6.

We then would enter the purchases on the Receive side of each blotter as the case may be, being careful to record all 100-share lots of Clearing House stock, or multiples thereof, in the Clearing House Blotter, and all other items in the Ex-Clearing House Blotter.

Let us assume now that the bank balance from the previous day was $90,000, and that there had been no stock balances; then we would enter the bank balance of $90,000 on the Deliver side of the Ex-Clearing House Blotter as the first entry for that day.

Naturally, the reader is wondering how we are to enter cash received as margin from customers. According to the rule that all cash received is entered on the Deliver side, all that we need to enter is the amount received, crediting the customer's account and debiting cash. Thus, the margin of $5,577.50 paid by Mr. Fordham is entered in the Blotter on the Deliver side, as shown in Fig. 6.

BALANCING THE BLOTTERS

22. Clearing House Blotter. — Having completely entered the data regarding each individual transaction as called for in each column on the Receive side, to balance that side it would then be necessary to total the individual money columns, then cross-foot the several totals, as appear in the amount, commission, interest, and tax columns, and the result should be the same as appears as the total of the Total Amount column.

The third step in the operation is to carry the total of the commission column to the commission column on the deliver side, add this amount to the total of the commission column on that page, then extend that total obtained to the Total Amount column, and the account to be credited is *commissions.*

The fourth step in the operation is to extend the total of the tax column on the deliver side to the Total Amount column, in which the amount is shown divided, the Federal tax account and the New York State tax account being credited with their respective portions of the tax collected on all sales or transfers. The rates of tax in each case are the same, as will be explained later under Revenue Tax Register.

The fifth step consists in totaling the several columns on the To Deliver side as they appeared before steps three and four were performed, then, by carrying over the totals of the commission and the tax columns to the Total Amount column, and footing the Total Amount column, the new total should agree with the amount column and prove the correctness of the work.

The *O* in the Whose Account column is a symbol to show to the bookkeeper that the item opposite it in the Total Amount column is not to be posted to any account in the Ledger, although the item is necessary in order to make the totals of the Total Amount columns of the Receive and the Deliver sides agree.

The sixth step is balancing the stock in order to know what the stock balances consist of. The method of procedure is as follows: Go over the Receive and Deliver sides of the Blotter and set off against each other all transactions in the same stock, and the balance to receive or to deliver can be arrived at. For example, suppose that we had bought 100 shares of U. S. Steel, and sold 400 shares of the same stock for our customers, then, setting off one transaction against the other, we would have a balance of 300 shares of U. S. Steel which we had sold over that which we had bought, so the Blotter would show a balance to deliver of 300 shares. Should the conditions have been reversed and we had bought 400 shares of U. S. Steel and sold only 100 shares, then our balance to receive would have been 300 shares.

Having balanced the stock, the seventh step is to carry the balances to deliver to the Receive side of the Blotter, and the balances to receive to the Deliver side; then, using the closing price or the Clearing House price per share, make the extension to the amount columns, on the Receive and the Deliver sides, and extend the total of these to the Total Amount columns on either side of the blotter.

The eighth step is to total the amount columns and the total-amount columns on both the Receive and the Deliver sides, and compare the results; that is, the total of the amount column on the Receive side should be compared with the total of the amount column on the Deliver side and the difference between these two totals should exactly equal the difference between the totals of the Total Amount columns of either side.

Should the cash totals on the Deliver side be greater than the cash totals on the Receive side, then we know that a profit has been made; that is, the excess of value received for securities sold is greater than that paid for securities bought. Therefore, since the Clearing House will make the adjustments for us during the operation of its system of clearing, we have a Clearing House balance coming to us; so we note that and submit a draft on the Manhattan Company for this profit. This amount is entered on the Receive side as *Clearing House draft* in both the Amount and Total Amount columns. This having been done, the Receive and the Deliver sides of the Blotter are in balance completely.

Should the cash total of the Receive side be greater than that of the Deliver side, then a loss has been sustained, so then we would make note of the amount and submit to the Clearing House a check payable to the Manhattan Company. This would be noted on the deliver side of the Blotter as *Check to balance*, as in Fig. 5. Then the sheet should be completely in balance.

All this having been done, the final operation is to enter all Balances in Stock, whether to receive or to deliver, along with the cash balances, whether check or draft, in the Ex-Clearing House Blotter in the manner already explained.

At this point it may be well to state that the sheet as submitted to the Clearing House for the New York Stock Exchange is an exact copy of the Clearing House Blotter when it has been completely balanced.

23. Balancing the Ex-Clearing House Blotter. Having learned how to balance the Clearing House Blotter, as already explained, it will be quite simple to balance the Ex-Clearing House Blotter. The procedure is as follows:

1. Treat the tax and commission columns as you did in balancing the Clearing House Blotter, by totaling the two columns and carrying the totals to the Total Amount column on the Deliver side, crediting Commissions account with the total commission, and the Transfer Tax and the Federal Tax accounts with the respective taxes collected and paid to the Federal and State governments as shown by the total of the tax column.
2. Foot the Total Amount columns on the Receive and the Deliver sides.
3. Deduct the Receive footing from the Deliver footing, and the result will be representative of the balance carried in the bank accounts. This balance is proved by comparison with the balances in the check books. Why the Receive footing is deducted from the Deliver footing will be clear if we recall the rule as to why all sales and cash received are recorded on the Deliver side.
4. Carry the balance just obtained to the Receive side and break it up into the several balances carried in the several banks, if there be more than one bank account. In other words, charge each bank with the balance on deposit.

REVENUE TAX REGISTER

24. Function.—The Revenue Tax Register is used to record all sales or transfers of stock, and the payment of stamp tax thereon, as provided under the amendment to the New York State law, which became operative June 30, 1905, and which provides for a tax of 2 cents per share, of $100 par value stock, on all stock transferred or sold.

This record provides for the recording of the date of sale or transfer; name of stock; the number of shares sold or transferred; par value of each share of stock; the name of the purchaser or the transferee; the number of stamps used, together with the face value of each stamp; also a column for entering the total value of all stamps affixed.

25. Importance.—Along with the fact that this record is required by law, it is of great importance in alleviating the tendency of employes to steal revenue stamps, for, by means of the data provided, it is an easy matter to check up the New York State Tax account.

26. Methods of Checking.—To check up the tax account, all that is necessary is to foot the value column, and add the amount of stamps on hand, which is found by inventory; the resulting figure should equal the amount on hand at the beginning of the period, as shown in the New York Tax Account in the General Ledger.

At the present time the Federal Government has a tax which is also collected on all stock sold or transferred. For this, a separate tax register is kept. This record is an exact duplicate of the one already described. This Federal Tax rate is the same as that charged by New York State. To check up on the Federal Tax account, the manner of procedure is the same as described above, with the exception that the Federal Stamp Account is the name of the account in the General Ledger.

27. Rates Charged.—Under the New York State law, and also the Federal law, the following rates are charged on all sales or transferring of stock.

New York State rate:

Stock with par value of $100, stamp tax is $2.00 per 100 shares
Stock with par value of $ 50, stamp tax is $1.00 per 100 shares
Stock with par value of $ 25, stamp tax is $ .50 per 100 shares
Stock with par value of $ 10, stamp tax is $ .20 per 100 shares
Stocks with no par value, the stamp tax is $2.00 per 100 shares

Federal rate:

Stock with par value of $100 or less, tax is $2.00 per 100 shares
Stock with par value of over $100, tax is 2 per cent. of the cash involved

John Jones
(Broker's Name)

DATE	NO. OF SHARES	PAR VALUE	STOCK	NAME OF PURCHASER	2¢	4¢	10¢	20¢	50¢	$1	$2	$10	$20	VALUE OF STAMPS
					NO. AND VALUE OF STAMPS									
July 1	200	100	Rubber	W. L. Foster							2			4 —
" 1	10	10	Anaconda	C. A. Duerfeld				1						20
" 1	100	100	Sears Roebuck	R. C. Templeton							1			2 —

Fig. 7

28. Example of Use. Remembering the fact that the taxes payable to the Federal government and to the New York State government are alike, to explain the manner of using one tax register will explain the other. The form of the New York State Revenue Tax Register is shown in Fig. 7. The data for the entries are obtained from the Deliver side of the Blotters. Reference to the Clearing House Blotter shows that on July 1 Mr. Fordham sold 200 shares of Rubber; so the state tax paid was $4, and stamps for that amount were used. This sale, therefore, is recorded in the Tax Register with the data required, as shown in Fig. 7. To pay the New York State tax, there would be required two $2 stamps to be affixed to the stock certificate. It will be noticed that only half of the amount registered in the Tax column of the Blotter is recorded; the other half is recorded in the Federal Tax Register.

In the Ex-Clearing House Blotter is a tax item of $4.40 which is divided in the same way, one-half being recorded in the New York State Tax Register and the other half in the Federal Tax Register.

CUSTOMERS' LEDGER

29. Use.—In order to record completely the transactions of his customers, it is necessary for the broker to segregate all the individual transactions entered into in the execution of a customer's order to buy or sell securities. For this purpose the ledger known as the Customers' Ledger is used; in it all the transactions executed under a certain customer's name are recorded in the account bearing the name of that customer.

This ledger may truly be considered as a part of the General Ledger, for there is no controlling account for the Customers' Ledger appearing in the General Ledger.

Since this ledger is a part of the General Ledger, it naturally follows that, in order to have a true expression of the business conditions as shown by the Balance Sheet, it will be necessary to see that the balances appearing in the Customers' Ledger also appear on the Balance Sheet.

30. Facts Recorded.—On the debit side are recorded:

1. All purchases of securities for the owner of the account; these entries are posted from the Blotter, and in the Ledger are shown the date of purchase, the number of shares and kind of stock, the market price paid, also the total amount paid for the stock, which includes the market price plus the commission charge.
2. All cash withdrawn by the customer whose account it is.
3. All interest charges.

On the credit side are recorded:

1. All sales of securities for the owner of the account; these entries are posted from the Deliver side of the Blotter, and show the date of sale, the number of shares and kind of stock sold, the market price received for the stock on the market, and the total amount received by the customer after the broker has deducted his commission charge and the tax charge.
2. All margin deposits made by the customer.
3. All short sales.
4. All interest allowed on margins deposited on short sales. The usual rate of interest allowed on margins is 2 per cent.

The broker may also divide equally with his customer the interest that comes to him as a result of his customer's short sale. Thus, if a broker borrows stock to make a delivery on his customer's short sale, he must give that broker from whom he borrows the stock a check for the full market value. This broker in turn pays the borrowing broker interest for the use of the money which he has received from him as a result of the borrowing of the stock, and it is this interest that the broker often divides equally with the customer.

31. Balancing the Ledger.—Once a month the Ledger accounts are balanced as to cash and stock. This is done after all interest items have been posted to the accounts. At this time also the Customer's Statement is prepared. This will be explained in detail further on.

The procedure of balancing the Ledger is as follows: First, balance the account in the usual manner as to cash. Second, balance the stock by comparison of securities noted as being held long on the debit side of the account with those sold on the credit side, and note how the account stands as to securities that are still held for that customer's account, or, as they say in Wall Street, of which he is long, and as to securities which the customer sold without having owned them, that is, short sales.

It is readily seen that if a customer buys 100 shares of U. S. Steel today and sells that same 100 shares of U. S. Steel tomorrow, there can be no *stock balance*, but if the customer sold at a higher price than that at which he bought there will be a *cash balance* in his favor.

Then, again, should that customer buy 100 shares of U. S. Steel today and also sell short 100 shares of Chino Copper stock, there would be a *long* stock balance in U. S. Steel; a *short* stock balance in Chino Copper, and a cash balance, which is determined by the price at which Steel was bought and Chino Copper was sold.

32. Example of Use.—As has been explained, all posting to the customers' accounts is done directly from the Blotters. The method of posting Mr. Fordham's Ledger account,

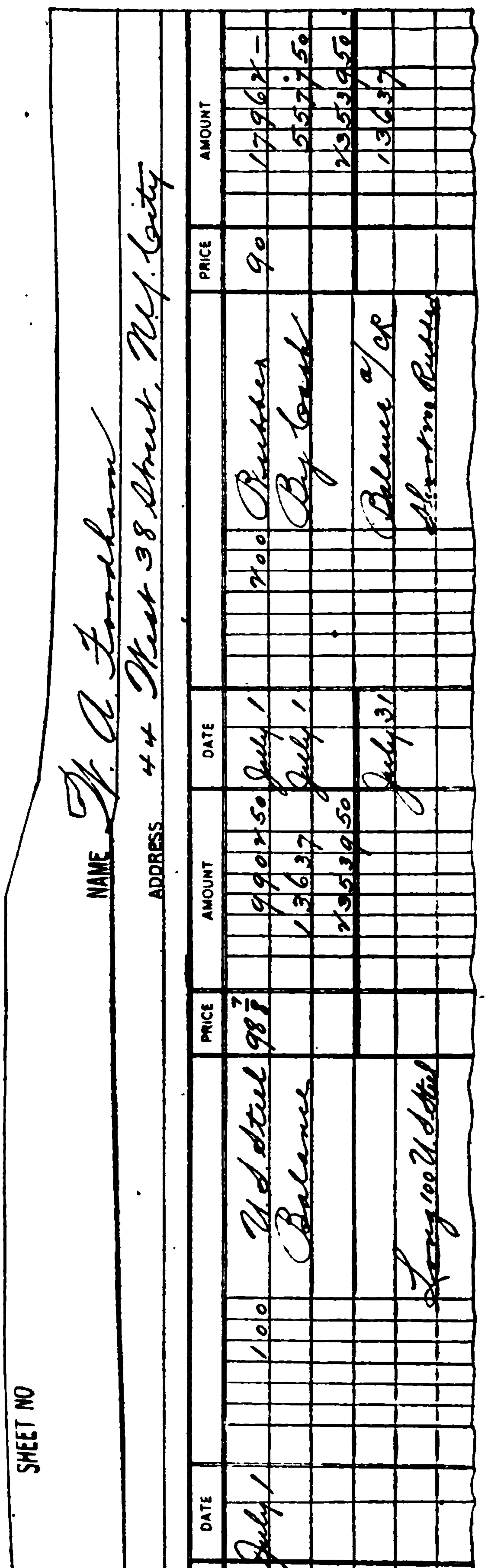


Fig. 8

as shown in Fig. 8, will now be explained.

In the Clearing House Blotter, a sale is recorded for Mr. Fordham; therefore, according to the rule for posting, Mr. Fordham's account is credited with the sale of 200 Rubber at 90, and the amount credited in the column for recording the proceeds from the sale is equal to the price received on the market, minus charges for commission, tax, or any other charges.

The Clearing House Blotter also shows that Mr. Fordham has bought 100 U. S. Steel at $98⅞, and, according to the rule, Mr. Fordham's account is debited with this purchase, the data being recorded as required by the form; the amount as recorded in the amount column is made up of the market price plus any charges for commission.

The Ex-Clearing House Blotter shows that Mr. Fordham deposited a margin of $5,577.50 on his long holdings and short sale, therefore he is credited with this amount.

If no further entries were made in Mr. Fordham's account until July 31, it would at that time be balanced in the following manner:

Proceed as to close any other account for a cash balance, then proceed to carry down any stock which the account owner may be long or short of.

Since it has been shown that the manner of posting to a customer's account in a broker's record and the manner of balancing that account are the same as used in handling any other ledger account, there should be no trouble in handling the other accounts which are affected by the other items in the Blotters.

CUSTOMER'S STATEMENT

33. Function.—The function of the Customer's Statement is to keep the customer fully informed as to his standing with the broker; for, by it, the customer can see a complete statement in detail showing what his purchases and sales have been during the month which this statement covers.

By this statement the customer may know what have been the amounts paid for the securities which he has bought, and what have been the amounts received for securities sold for his account. He may also obtain from this statement what have been the expense items of interest, commission, and tax on sales. He may see at a glance from the item of cash what has been the amount of margin deposited by him, and by adding his profit from operating to this marginal deposit, or, in the case of a loss from operating, deducting this loss from the marginal deposit, he may know the amount of his new marginal deposit remaining to carry his account.

By reference to his statement the customer may see his position as to stocks short or long. In short, the statement shows the customer all the details regarding his account as it stands in the Customers' Ledger of his broker.

34. Check on Customer's Statement.—In the Section on *Operating on the New York Stock Exchange* it was explained that whenever a brokerage firm executes an order for a customer, the customer receives a notice to the effect that the order has been executed. On this notice the complete details as to the price, name of security, and quantity sold or bought

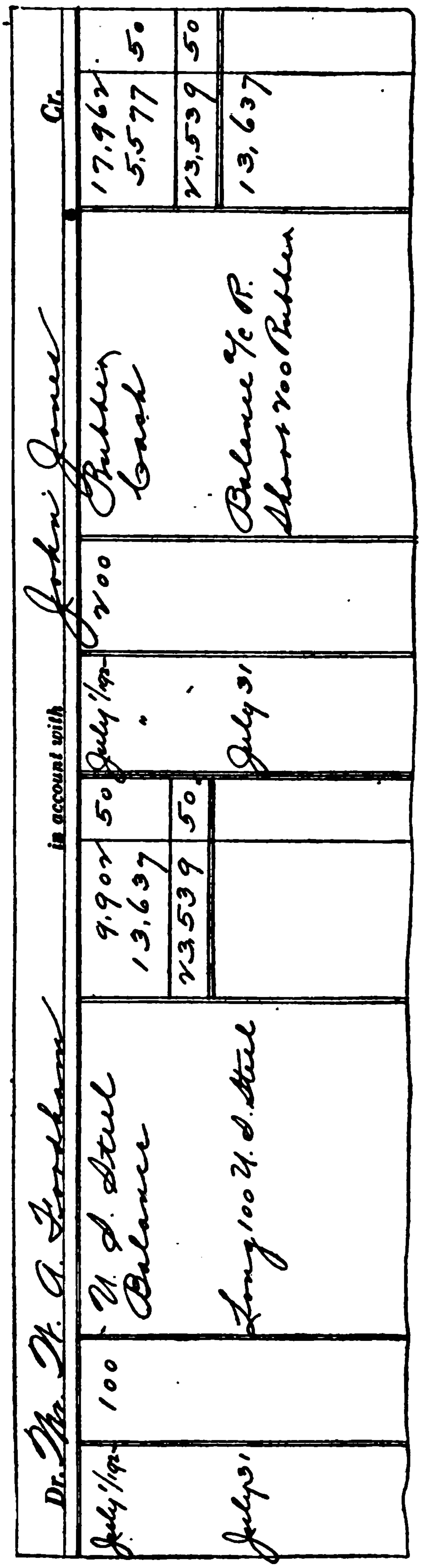


FIG. 9

are given. So, by comparing these notices with the monthly statement, a check can be had on the statement as furnished by the broker to his customer.

35. Rule for Payment of Interest.—When a broker furnishes capital to a customer he charges interest at the rate of 6 per cent. per annum, while on the credit balances he allows the customer interest at the rate of 2 per cent. per annum.

This rule is subject to the one modification that in the case of a short sale, which gives the customer a fictitious credit balance, no interest is allowed the customer by the broker. It is readily seen that any cash coming from the sale of a security which is not owned by a customer does not in the larger sense belong to that customer; for some part of it at least must be used to borrow that security at some future date in order to make a delivery on that customer's short sale, since a check for the market value of this stock will have been given to the broker from whom the stock will be borrowed. From this explanation it will be seen that in reality the customer does not have the cash as a credit to his account.

36. Relation of the Statement to the Account. The statement must agree in detail with the customer's account, as it appears in the Ledger, and must show all long holdings, all short transactions, along with the balance in cash, carried down either as a debit or a credit, as the case may be.

37. Example of Use.—It has been explained that a customer's statement agrees in detail with the customer's account in the Ledger, showing all long holdings and all short transactions, with the cash balances carried down, either Dr. or Cr. as the case may be, therefore no further discussion is needed to explain the form shown in Fig. 9, which is a statement for Mr. Fordham, taken from his account as shown in the Ledger.

SECURITIES LEDGER

38. Function.—The Securities Ledger, or Stock Record. as it is known usually in Wall Street, is used to list the securities held for customers' accounts, and to show the place of deposit, or any other disposition made of them.

39. Structure.—The Securities Ledger may be either a loose-leaf volume or a bound one, as best suits the needs of the firm. Usually the loose-leaf form is used; for the holdings of a firm doing much business are of many different kinds of securities and the volume of any one security held so fluctuates that it is often necessary to allot more than one page to a single security, and this can be easily done with a loose-leaf volume.

All certificates of the same kind of stock are listed under one head; thus, if a broker had one or one hundred different certificates of stock of the U. S. Steel Corporation, these certificates would all be listed under the heading of U. S. Steel, on the U. S. Steel sheet.

On the left-hand side of the Ledger sheet are recorded: (1) the holdings of the customers, or (2) stocks borrowed from some other broker to make a delivery on a short sale. The following data are recorded:

1. Date received.
2. Number of shares received.

U. S. STEEL

DATE	NO. OF SHARES	FROM WHOM BORROWED	FOR WHOM BORROWED	OWNER	DATE	NO. OF SHARES	TO WHOM LOANED	SHORT	PLACE OF DEPOSIT
July 7/09	100	J. M. Ford	W. J. Appel	W. A. Fordham	July 7/09	100	J. M. Ford	W. J. Appel	
July 3/09	300				July 3/09	300			

FIG. 10

3. By whom owned.
4. In case of borrowed stock, for whose account borrowed.
5. From whom borrowed.

On the right-hand side are shown the securities which are short or those that can be loaned in the street, or those which are on deposit either in the vault, as collateral for a loan at the bank, or at the transfer office. The data recorded are as follows:

1. Date.
2. Number of shares.
3. To whom loaned, if loaned.
4. For whose account short.
5. Place of deposit.

40. Manner of Use. Since the Securities Ledger is one of the records of the cashier's department, it is kept under his supervision, if not by himself directly, and from it he is able to check the securities for which his firm is responsible. When a stock certificate enters the cashier's hands, it is recorded in this Stock Record.

41. Example of Use. A page of the Securities Ledger showing the record kept of U. S. Steel stock is illustrated in Fig. 10. This shows that the U. S. Steel purchased by Mr.

Fordham was received July 2, 1919, and that it was loaned to T. M. Ford, another broker. It also shows that on July 3, W. T. Appel sold short 300 shares of Steel, and that to make a delivery for him his broker borrowed 300 shares of Steel from T. M. Ford. The manner of entering these transactions is clearly shown.

STOCKS BORROWED AND LOANED BOOK

42. Function.—The function of the Stocks Borrowed and Loaned Book is to provide a record of all stocks borrowed and loaned. Such a record is necessary in order that the broker may at all times know how he stands in regard to stocks that he has borrowed or loaned.

43. Structure.—This record is either a bound volume or a loose-leaf one, the bound volume being usually preferred. The record is divided into two parts, namely, the Borrowed and the Loaned sections, and columns for recording the following data are provided:

On the Borrowed section are recorded:

1. Date of borrowing.
2. Number of shares borrowed.
3. Description of securities.
4. From whom borrowed.
5. Price at which the securities were borrowed. (Price used is either the Clearing House price for that day or the market price at the time of borrowing.)
6. Rate of interest, and any changes in the interest rate as shown by the money market, together with the number of days the stock is borrowed.
7. The date of return.

On the Loaned section, the data recorded are:

1. Date of loaning.
2. Number of shares loaned.
3. Description of securities.
4. To whom loaned.
5. Price at which stock was loaned.

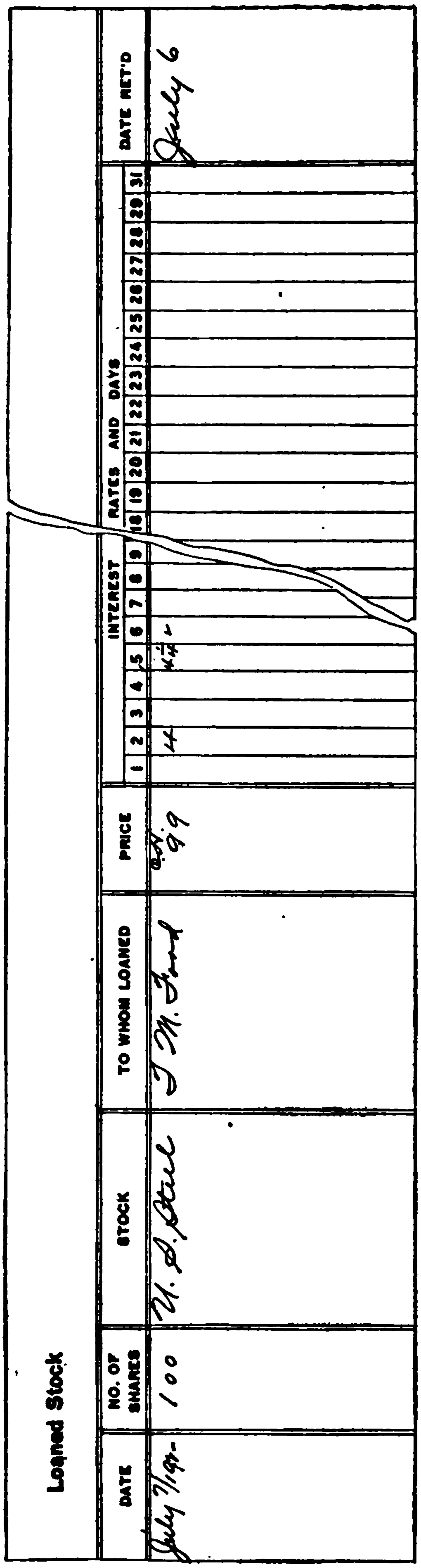


Fig. 11

6. Rates of interest and number of days the stock was loaned.

7. Date of return.

44. Manner of Checking.—To provide a check upon this record one need only compare the stock listed in it with the Securities Ledger in order to verify the stock entry; whereas, the price entries are checked by comparing them with the entries in the Stock Borrowed and Loaned Account in the General Ledger.

45. Example of Use. By reference to the Loaned Stock section as shown in Fig. 11, it will be seen that Broker Jones, the owner of this book, loaned to T. M. Ford, on July 2, 100 shares of U. S. Steel at the Clearing House price of $99 per share. For this stock T. M. Ford gave Broker Jones a check, which represented the value, at Clearing House price, of the stock borrowed by him. For the use of this money, Broker Jones paid T. M. Ford interest at the rate of 4 per cent. from July 2 to 5, and 4¼ per cent. from July 5 to 6 when the loaned stock was returned to Broker Jones. Broker Jones returned the check to T. M. Ford, plus interest.

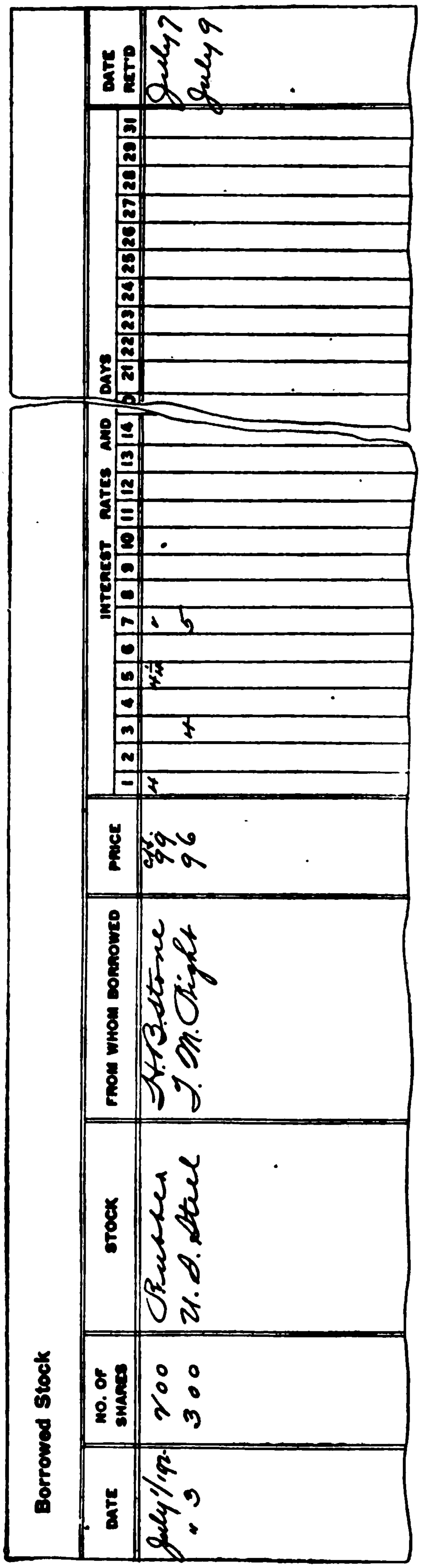


Fig. 12

The check mark (✓) in the column headed 6 indicates that the interest, 4¼ per cent., (column 5) was in force to and including the 6th, at which time Broker Jones returned the check to T. M. Ford, plus interest at the rates shown.

This explanation should make clear also the entries in the Borrowed Stock section, as shown in Fig. 12. To be able to understand and interpret these data, the main thing to be remembered is that when Broker A loans Broker B stock, then Broker B pays to Broker A a check for its market value. Then Broker A pays interest for the use of this money at the rates indicated.

MONEY BORROWED AND LOANED BOOK

46. Function. — The Money Borrowed and Loaned Book is used to record all the essential data regarding the money borrowed and loaned by a broker for his customers.

Just as a broker is able to borrow stock in order to provide for the delivery of securities which a customer has sold short, or to loan his surplus securities which are not needed

for delivery, so also is he able to borrow money from banks by depositing securities as collateral. One broker may also borrow from another broker. On the other hand, should the broker have excess funds, he may loan them to other brokers in the street. Therefore, to record these acts a Money Borrowed and Loaned Book is used.

47. Structure.—The record has two parts, the Money Borrowed and the Money Loaned sections. In the Borrowed section are recorded the following facts:

1. Date of borrowing.
2. Amount borrowed.
3. Collateral deposited.
4. Substitutions in collateral from time to time.
5. From whom borrowed.
6. Rates of interest and duration of loan.
7. Date of payment.

In the Loaned section are recorded:

1. Date of loan.
2. Amount of loan.
3. Collateral deposited.
4. Substitutions in collateral.
5. To whom loaned.
6. Rates of interest and duration of loan.
7. Date of payment.

48. Manner of Checking.—Since it is readily seen that only the securities listed on the Borrowed side of this record, as collateral for a loan to the owner of this book, are the securities controlled or owned by him, it follows that they should appear in the Securities Ledger as well, therefore the two records may be compared.

To check the money values listed in the Money Borrowed and Loaned Book, reference should be made to the Loan Account in the General Ledger to check items appearing in the Loaned section, whereas the items listed in the Borrowed section should be checked with the items as shown in the Sundry Debits account in the General Ledger.

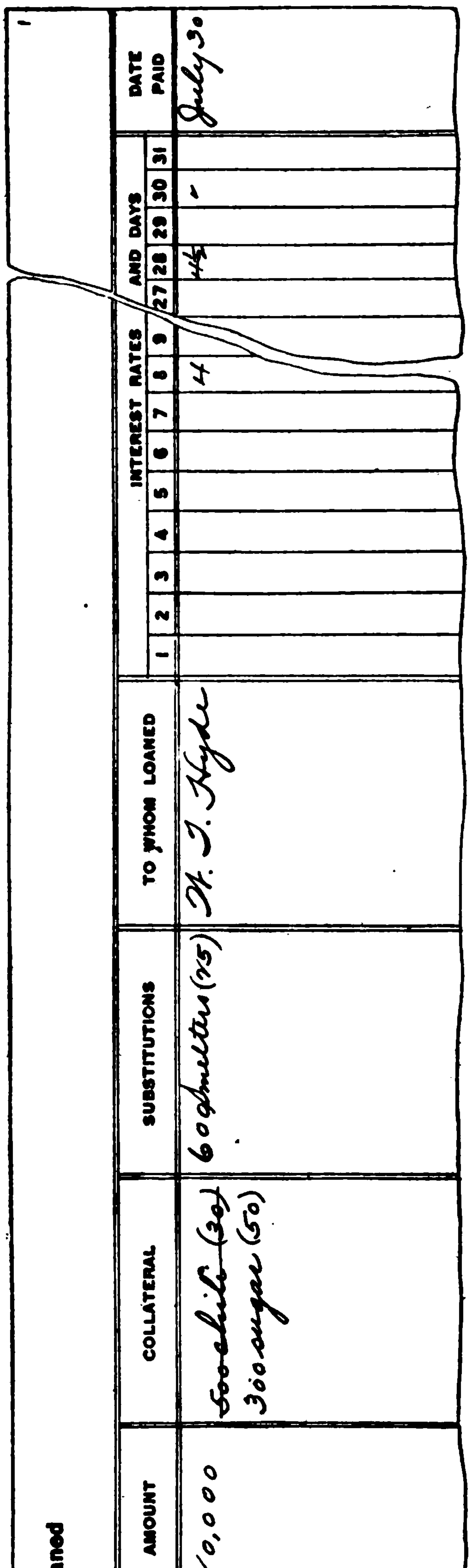
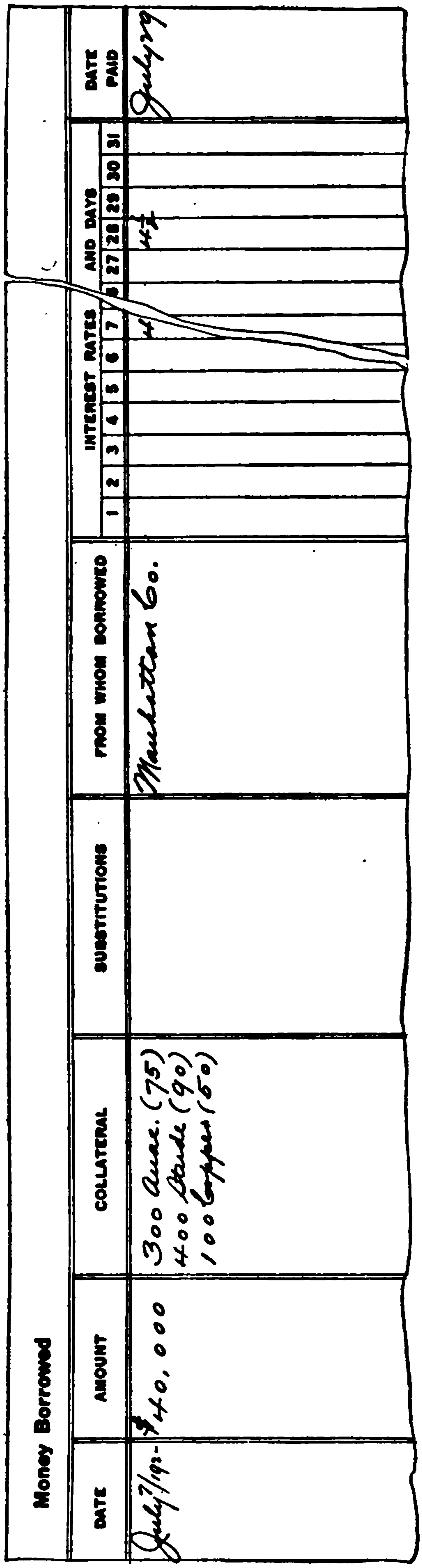


Fig. 13

49. Example of Use. The method of recording money loaned is illustrated in Fig. 13, which represents a page from the Money Loaned section. When a broker loans money, the one borrowing the money furnishes collateral for the loan. The data recorded are shown in the form. In this case, the broker who owns the record has loaned $20,000, and for that loan W. T. Hyde has deposited collateral, at first consisting of 500 shares of Chile Copper with a market value of $30 a share and 300 shares of Sugar with a market value of $50 a share. Later on, W. T. Hyde makes a substitution in that collateral. He withdraws the 500 shares of Chile Copper and substitutes 600 shares of Smelters worth $25 a share on the market. When one figures the market value of the securities deposited as collateral, as against the loan of $20,000, it is readily seen that a wide margin is put up by the borrowing broker, W. T. Hyde.

The loan was made on July 8, 1919, at an interest rate of 4 per cent., and this rate was continued till the 28th of the month, when it was changed to 4½ per cent., which held till the 30th, when the loan of $20,000



Money Borrowed

DATE	AMOUNT	COLLATERAL	SUBSTITUTIONS	FROM WHOM BORROWED	INTEREST RATES AND DAYS	DATE PAID
July 7/19-	$40,000	300 Anac. (75) 400 Stude (90) 100 Copper (50)		Manhattan Co.	7: 4 27: 4½	July 29

Fig. 14

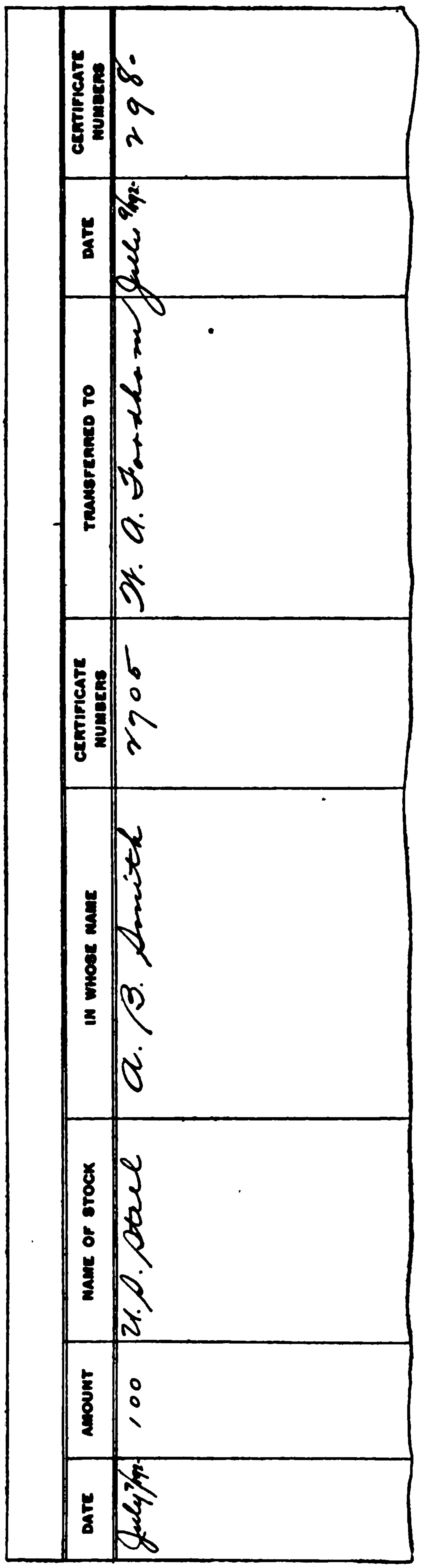
was returned by W. T. Hyde and his collateral was returned to him. W. T. Hyde also paid his interest charges when the principal was returned.

With this explanation it should be clear just how the entries are made on the Money Borrowed sheet, Fig. 14, which records the money borrowed by the broker who owns this record. In this case it is seen that this broker has borrowed $40,000 from the Manhattan Company and has deposited securities as collateral, with the interest rates changing as before. The loan was paid on the 29th of the month.

STOCK TRANSFER REGISTER

50. Use.—As it frequently becomes necessary to transfer a certain block of stock from one holder's name to that of another, it is necessary to provide a record of such stocks as may be sent to the transfer office in order that none may be lost through the operation. Therefore, the Stock Transfer Register has come into use.

In this are recorded all stocks deposited with the transfer office. By reference to the form, as shown in Fig. 15, it



DATE	AMOUNT	NAME OF STOCK	IN WHOSE NAME	CERTIFICATE NUMBERS	TRANSFERRED TO	DATE	CERTIFICATE NUMBERS
July 7/92	100	U. S. Steel	A. B. Smith	2705	W. A. Franklin	July 9/92	298

FIG. 15

will be seen that columns are provided for recording the important data regarding the stock deposited, such as:

1. Date of deposit.
2. Number of shares deposited.
3. A description of such shares.
4. In whose name, or from whom transferred.
5. Certificate number.
6. Date of withdrawal.
7. For whom withdrawn (to whom transferred).
8. New certificate number.

51. Reason for Transfer.—Whenever dividends are due on stock certificates, the dividends will naturally be paid to the last-recorded holders as shown on the books of the corporation or company whose stock these certificates represent. Therefore, it is good policy to have a stock certificate recorded under the name of the present owner, especially when a dividend is due.

In this connection it is well to know that the usual custom in the street is for the broker to charge $\frac{1}{2}$ of 1 per cent. for the collection of dividends on certificates held for customers, and 1 per cent. on all coupons collected.

52. Example of Use.—Fig. 15 shows the entries made in the Stock Transfer Register in connection with the transfer of the 100 shares of U. S. Steel, which Mr. Fordham bought, from the name of the previous owner to his own name.

The headings for each column, with the exception of "In whose name," require no further discussion. The column "In whose name" is used to record the previous owner's name as appeared on the stock certificate when that certificate was delivered to the transfer office.

VAULT LIST

53. Function.—The Vault List, as used in the brokerage house, is a form for recording the securities that are deposited in the safe-deposit vault, in order that the broker or his clerks may readily know, by reference to it, just what securities are on hand.

54. What It Records.—This record provides a place for recording the following data regarding securities in the vault:

1. Date of deposit.
2. Number of shares.
3. Kind of securities.
4. Name of owner.

When a certificate is taken out of the vault the following data are recorded:

1. Date of withdrawal.
2. Number of shares withdrawn.
3. Kind of securities withdrawn.
4. Purpose of withdrawal.

This record may be verified by checking it with the Securities Ledger.

55. Example of Use.—The form of the Vault List is shown in Fig. 16. If it be assumed that the securities, as recorded in the form shown, were actually deposited and with-

drawn, an idea of the manner of handling this record will be had.

The first entry records the fact that on the third of July, 100 shares of Anaconda Copper, belonging to F. H. Towne,

Deposited				*Withdrawn*			
DATE	NO. OF SHARES	STOCK	NAME OF OWNER	DATE	NO. OF SHARES	STOCK	PURPOSE OF WITHDRAWAL
7/3/12	100	Anaconda	F. H. Towne	7/6/12	100	Anaconda	Sale
7/4/12	300	Studebaker	J. M. Glass				
	400	Copper	J. A. Mau				

FIG. 16

were deposited in the vault, and on the sixth of July 100 shares of Anaconda which belonged to F. H. Towne were taken out because of a sale.

PRIVATE LEDGER

56. Use.—Whatever is true regarding the use of the private ledger in a mercantile concern is equally true regarding its use in Wall Street.

The Private Ledger is used to segregate a few accounts from those kept in the General Ledger, and to complete a trial balance or to make a Balance Sheet correct, the balances from the Private Ledger must be used.

The Private Ledger is used in order to keep a knowledge of the income of the concern, the capital accounts of the partners, and other important business accounts, from being known to all who may have access to the books of the office. The manner of handling the accounts recorded in it is the same as for handling any other ledger account.

The Private Ledger would contain the accounts from which the true profit and loss would be known, and what accounts are included therein would be determined by the firm.

The ruling and arrangement are the same as in any other ledger.

A control account for this ledger would be kept in the General Ledger.

GENERAL LEDGER

57. Use.—Where the ledgers already explained are used, the General Ledger of a Wall Street firm contains the asset and liability accounts and the general nominal accounts. In short, it contains all the accounts not kept in the Customers' or the Private ledger, as well as controlling accounts for these ledgers.

58. Structure.—Where a Customers' and a Private ledger are used, the General Ledger is usually a bound volume. Its ruling and arrangement is that of the usual ledger sheet with the standard ruling.

CLOSING THE BOOKS

59. Procedure.—At certain periods of the year the broker's books are closed in the same manner as are the books in a mercantile concern. The balances from the income accounts in the General Ledger, along with the expense accounts, are posted to the customary temporary account called Profit and Loss Account. The final balance of this account will then represent the net profit or net loss to be debited or credited to the proprietor's account.

PROFIT AND LOSS STATEMENT

60. The form of Profit and Loss, or Net Income, Statement is given herewith. In preparing this statement, the first step is to find the operating income; from this is subtracted the operating expense, and the remainder will be the net operating income. The net operating income having been found, it is extended to the third column.

PROFIT AND LOSS, OR NET INCOME, STATEMENT

1. Operating Income:				
	Commissions			
2. Less Operating Expense:				
	General office expenses			
	Administration expenses			
	Branch office operating expense	......		
	Salesmen's salaries and expenses	......		
3.	Total operating expense		......	
4.	Net operating income			
5. Additional Income:				
	Interest on customers' accounts			
	Interest on notes receivable			
	Interest on stocks borrowed			
	Premiums on stocks loaned			
	Interest on bonds held for investment	......		
	Dividends on stocks held for investment	......		
6.	Total additional income			
7. Less Additional Expense:				
	Interest on stock loans, equivalent to money borrowed			
	Interest on money borrowed	......		
	Interest on notes payable	......		
8.	Total additional expense		......	
9.	Net additional income			......
10.	Net income from all sources			......

The next step is to find the total additional income; then from that subtract the total additional expense, and the remainder is the net additional income. Then to find the net income from all sources, add the net operating income and the net additional income, and the result will be the net income from all sources.

The headings as given in the statement show just what elements enter into the preparation of a Profit and Loss, or Income, Statement for a Wall Street house. The data for making up this statement will be obtained from the General and also the Private Ledger, for it will be recalled that the Customers' Ledger is used to record the customers' accounts only, therefore they cannot represent any of the nominal or proprietorship accounts. Also, it is to be remembered that the profit or loss for a given period is determined by subtracting from the total income the total expense of that period; the

result represents the net profit, or income, or loss, from all sources for that period. With the exception of possibly the subcaption, Interest on Stocks Borrowed, under Additional Income, the subheadings should be easily understood.

Some might wonder how stock that is borrowed can net an income to the borrower. The reason is, as has been explained before, that whenever stock is borrowed, a cash value is exchanged. Naturally, the broker loaning the stock has the use of additional capital, so he pays interest for the use of that money at an agreed rate, therefore the broker loaning the stock receives cash from the broker borrowing and for the use of this additional capital the broker loaning the stock pays the broker borrowing the stock a certain interest rate for the use of his money. Hence stocks borrowed are a source of interest.

PREPARATION OF THE BALANCE SHEET

61. What the Balance Sheet Shows.—The Balance Sheet is usually said to show facts regarding the accounts as they stand; but in any case it is only an approximation, for no firm with a definite amount of capital invested in sundry ventures, or risks, can with any certainty say just what their true net worth is at any time, until all accounts outstanding are closed and the business engaged in has come to an end. In Wall Street this is especially true; for the broker is more or less liable to loss on his customers' accounts, because of the fluctuations in the market value of securities. Therefore, we may say that the Balance Sheet shows an approximation to the net worth of the firm.

62. Manner of Preparation.—As in the preparation of a balance sheet for a firm engaged in any other business, the first step is to prepare a Trial Balance, which comprehends a summary of the debits and credits, taken from the books of account, namely:

1. Customers' Ledger—For position of customers' accounts as to Dr. or Cr. balances.

2. Private Ledger—For position of capital accounts and income.
3. General Ledger—For position of nominal accounts.

63. Form of Balance Sheet.—The summary obtained as described will enable the accountant to subdivide the data so

BALANCE SHEET

Assets		Liabilities	
1. Capital Assets:		1. Current Liabilities:	
Value of Exchange seats	....	Stock loans	
Value of securities held on investment	....	Accounts payable	....
Furniture and fixtures	....	Accrued interest payable	....
2. Current Assets:		Accrued salaries payable	....
Cash	....	2. Total Liabilities	
Accounts receivable	....	3. Net Resources, represented by:	
Notes receivable	....	Proprietor's capital account	..
Stocks borrowed	....	Reserves set aside	....
Accrued interest receivable	....	Undivided profit	
3. Suspense Debits to Income:			
Exchange dues paid in advance	....		
Rent paid in advance	....		
Insurance paid in advance	....		
Advertising paid in advance	....		
Other asset items that will be charged off to expense at some later date	....	4. Total Liabilities and Resources:	
4. Total Assets			

FIG. 17

gathered into the assets and liabilities, and the Balance Sheet will appear as shown in Fig. 17.

EXPLANATION OF ITEMS

64. Assets.—In the column of assets there are only two items that demand explanation, for they are somewhat different from items handled thus far, namely:

1. *Stocks Borrowed:* Naturally one would expect such an item to be a liability. However, it is not, because for every stock borrowed there is a check for its market value given to the loaning broker by the broker borrowing, thus making the item an asset. Should the stocks borrowed be returned, then he would have an asset in cash of equal value; for the market value would be given for its return. Thus, if Broker A borrows from Broker B stock worth $500 on the Exchange, Broker A gives Broker B a check for $500 in exchange for the stock borrowed. Then, when Broker A returns that stock to Broker B, Broker A receives from Broker B the check for $500, or the then present market value of the stock. So borrowed stock is in reality an asset.

2. *Accrued Interest Receivable:* This item refers to interest items on loans due the broker from outside sources around the street, and all other sources such as loans to customers on their accounts.

65. Liabilities.—Under the heading of liabilities it will be noticed that the liabilities are all of a current nature; that is, they have an early due date. The other items listed are sufficiently clear to be understood without further elaboration.

66. Net Resources.—To determine the net resources of the firm, subtract the total liabilities from the total assets. The net resources include:

1. Investment of the proprietors.
2. Reserves set aside.
3. Profit remaining for distribution among the proprietors.

AUDIT OF A BROKERAGE FIRM'S BOOKS

PURPOSE AND OBJECTS

67. Purpose.—The purpose of an audit of the books of a brokerage firm is the same as that for an audit of any other concern in any other business; namely, to find out the actual financial position and earnings or losses of that particular firm, in order that the proprietors, bankers, and executives may have

a true knowledge of these conditions as shown by the records of the firm.

68. Objects.—An audit consists of an examination of the accounts in the Customers', Private, and General ledgers, and all vouchers and other records, along with statements of the business.

Its objects are as follows:

1. To analyze and verify the income and operating expenses for a certain period.
2. To prepare a certified balance sheet, which shows the true condition of the firm at the time of the audit.
3. To prepare a statement comparing the operating data for a period of years.
4. To ascertain whether the books have been kept correctly, by means of an examination for the detection of errors.

In order correctly to interpret the work of others in this case, it is necessary for the auditor not only to be a person with a thorough working knowledge of accountancy, but he must have a working knowledge of the accounting system as followed in Wall Street.

Just as in any other business, an audit provides a benefit, first to the proprietors, because it assures them that the books are being correctly kept; second, to the executives, in that it assures them of their effective supervision; third, to the bookkeepers and clerks, in that it assures them that their work is being correctly done and relieves them of any suspicion which might come upon them.

CONDUCTING THE AUDIT

69. Plan of the Audit.—Since no definite rule can be given as to the conduct of an audit, it is left wholly to the auditor to provide his own plan of procedure; but the experienced auditor usually has a plan, which he may change as conditions demand. He should be provided with a list of the books used, as well as definite information as to which are the principal and which are the subsidiary books. He should also be

provided with the names of those persons empowered to receive and pay out cash.

The extent of the audit will be determined by the agreement entered into between the auditor and his client.

70. Verification of Cash Accounts.—Naturally, the initial step in the audit consists in auditing the cash account. The cash on hand plus the bank balances should equal the cash balance as shown by the cash account.

To verify cash disbursements, as recorded in the cash account, the entries are checked with the returned vouchers.

To verify the cash receipts, they are checked with the bank deposits as recorded in the bank pass book. To check each individual entry in either case, the cash entry is checked with the ledger account affected.

71. Verification of the Other Accounts.—Since the Blotters used in a brokerage business partake of the nature of a journal as well as of a cash book, they constitute the record from which all posting is done to any of the ledgers in use; therefore, to verify any entry to any account in the ledgers, recourse should always be had to the Blotters. Sometimes the checking is done from the Blotter to the ledger, but frequently the checking is done from the ledger to the Blotters.

Since the Clearing House Blotter records transactions in Clearing House stocks, it will only serve as a check upon entries recording Clearing House stocks of 100-share lots or multiples thereof.

Since the Ex-Clearing House Blotter records all transactions in Clearing House stocks of less than 100 shares, also all other stocks or bonds, as well as all cash receipts or disbursements, it naturally follows that this record provides the supporting data for entries of this kind in the ledger accounts.

As the entries in the ledgers are checked they should be marked with a distinguishing mark, and when the checking is completed the open items not checked should be specially looked up. The footings of the several accounts should be proved.

72. Verifying Assets and Liabilities.—All assets and liabilities as set forth in the Balance Sheet should agree

with the ledger accounts; and it is up to the auditor to see that they are neither overestimated nor undervalued and that they are actually existing. The auditor should personally examine the securities held either for investment or for customers' accounts, also all commercial paper and the like. At all times the auditor must see that all assets and liabilities are included. Such items as invoices and unpaid bills very often are on file in the office, but not entered in the proper accounts; then, too, certain contingent liabilities, that is, uncertain liabilities, such as discounted notes receivable at the bank, disputed claims, and such items, are not incorporated in the Balance Sheet. Should this be true, the auditor should see that they find their way into the Balance Sheet.

73. Verifying Income and Expenses.—By turning back to the form showing the Income Statement, Art. **60**, the sources from which income and expense items come are readily seen; knowing these, it will not be difficult to check those items of income and expense. These items should receive careful attention, and the various amounts should be carefully checked to see that the profits are not overstated, also that the expense items are all included, along with the income items, in order that a true statement of profit and loss may be obtained.

THE CLEARING HOUSE

74. Two Functions.—The Clearing House for the New York Stock Exchange may be said to be composed of two departments; namely, the Distributing Department and the Auditing Department.

75. The Distributing Department.—The Distributing Department is the department that arranges for the exchange of *receive* tickets and *deliver* tickets, whereon are recorded the data regarding the transactions entered into by the two contracting parties. This department is the medium through which comparisons of sales data are made.

76. Manner of Operation.—To make plain the method of procedure, the routine connected with the business of

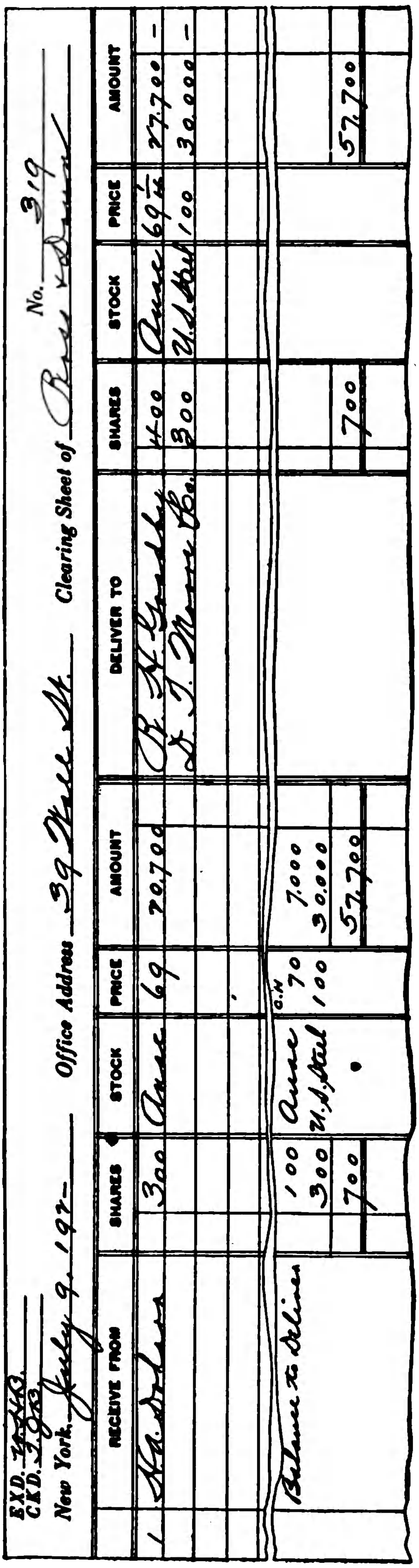


Fig. 18

Ross & Doun as shown by their Clearing House Sheet, Fig. 18, will be explained. Such a sheet must be sent by the broker to the Clearing House not later than 7:00 P. M. of the day on which the business is transacted.

The sheet shows on the Receive side that Ross & Doun have bought from H. A. Dobarr 300 shares of Anaconda at 69. When this information comes to the ticket clerk of Ross & Doun, he immediately makes out a receive ticket as shown in Fig. 19, and sends it to the Distributing Department of the Clearing House, where it is put into the box of H. A. Dobarr, from which it and other tickets are collected at frequent intervals by a clerk from Dobarr's. When Dobarr's clerk receives the ticket, he immediately compares it with the data that he has on the transaction. If the ticket is correct, he stamps it with his firm's stamp and retains it to be sent to the Clearing House later with his Clearing House Sheet. On the other hand, when Dobarr's ticket clerk received information that the sale had been made, he immediately made out a Deliver ticket and sent it through the Distribution De-

partment to Ross & Doun, who compared it with their data, and, if it was correct, stamped it and kept it to be sent to the

No. 319 Our Line Number 1 New York, ________ 19____

CLEARING HOUSE OF THE NEW YORK STOCK EXCHANGE

RECEIVE FROM H. A. Dohan

300 shares Anac @ 69 $ 20,700

for account of the undersigned.

Their Line Number 4 Ross & Doun.

FIG. 19

Clearing House with Ross & Doun's sheet that night. In this way the buying broker and the selling broker each have an opportunity to check up the other's memoranda of the sale.

No. 319 Our Line Number 1 New York, ________ 19____

CLEARING HOUSE OF THE NEW YORK STOCK EXCHANGE

DELIVER TO R. H. Goodby

400 shares Anac @ 69¼ $ 27,700

for account of the undersigned.

Their Line Number 2 Ross & Doun

(a)

No. 319 Our Line Number 2 New York, ________ 19____

CLEARING HOUSE OF THE NEW YORK STOCK EXCHANGE

DELIVER TO S. J. Moore & Co.

300 shares U. S. Steel @ 100 $ 30,000

for account of the undersigned.

Their Line Number 31 Ross & Doun

(b)

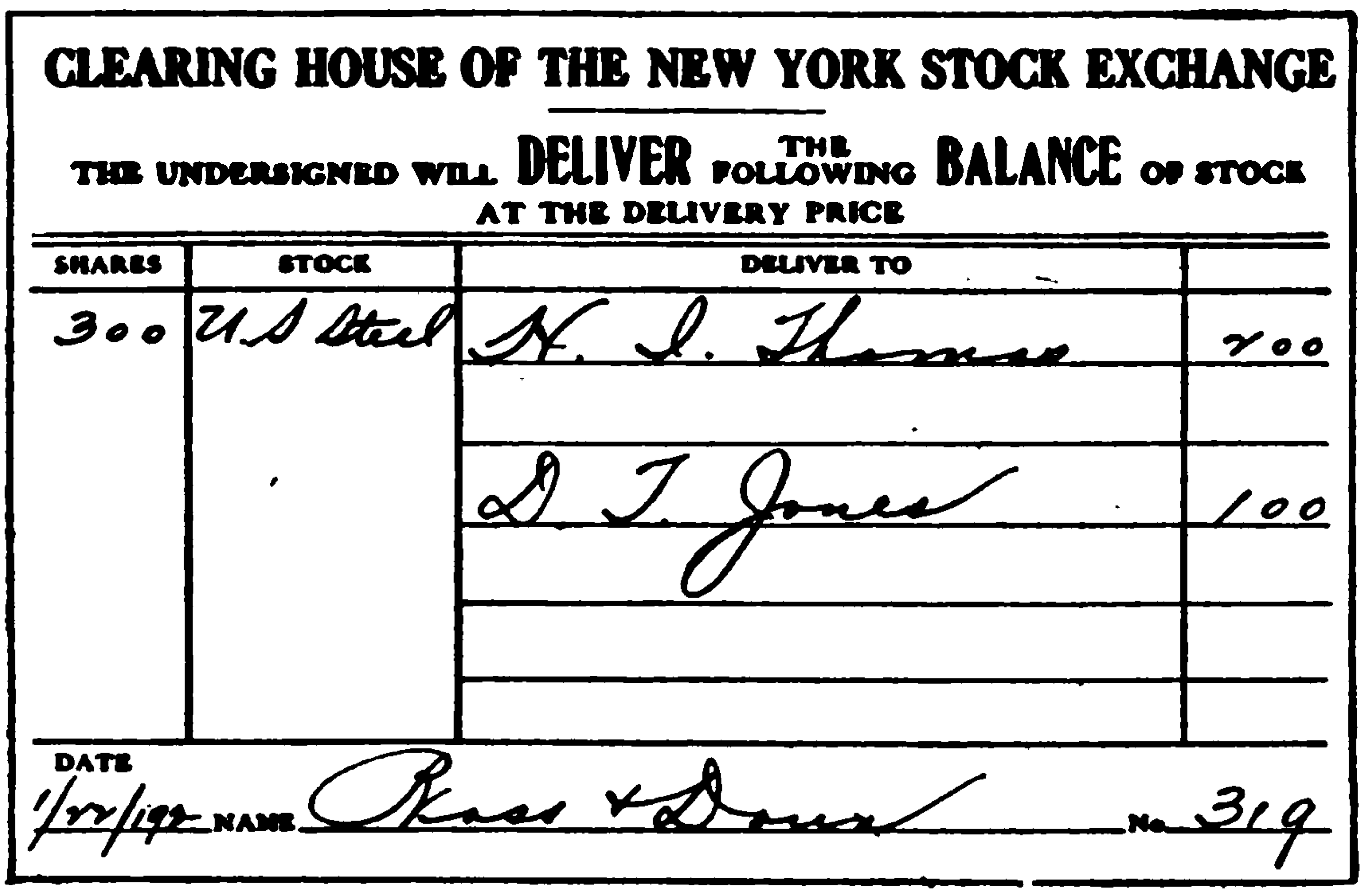
FIG. 20

77. The Deliver side of the sheet shows that Ross & Doun have bought from R. H. Goodby 400 shares of Anaconda at

64¼, and from D. T. Moore & Co. 300 shares of U. S. Steel at 100.

In this case the ticket clerk sent out to each office, through the Clearing House, a deliver ticket, Fig. 20 (*a*) and (*b*), and he received in return a receive ticket from them; the trade was compared in the manner described, and each broker retained the other's ticket until that night when he delivered his sheet at the Clearing House.

78. Balancing the Sheet for Stock.—The trades for the day having been written up from the tickets exchanged, the next thing to do is to balance the sheet for stock. As was



CLEARING HOUSE OF THE NEW YORK STOCK EXCHANGE

THE UNDERSIGNED WILL DELIVER THE FOLLOWING BALANCE OF STOCK AT THE DELIVERY PRICE

SHARES	STOCK	DELIVER TO	
300	U S Steel	H. S. Thomas	200
		D T Jones	100

DATE 1/22/19— NAME Ross & Dow No. 319

FIG. 21

explained under balancing the Clearing House Blotter, all that is necessary is to set one entry off against the other; for instance, referring to the Clearing House Sheet, if we set off the receive item of 300 Anaconda against the deliver item of 400 Anaconda, it is readily seen that the balance to deliver is 100 Anaconda; whereas, in the case of the entry of the 300 U. S. Steel to deliver, there is no set-off for that, correspondingly, there is a balance to deliver of 300 U. S. Steel, as noted on the sheet.

A stock balance ticket in the form shown in Fig. 21 is made out for each stock, the Deliver column being left blank to be filled in at the Clearing House.

79. Entering the Stock Balances.—The stock balances having been determined, they are entered on the Clearing House Sheet, as shown in Fig. 18.

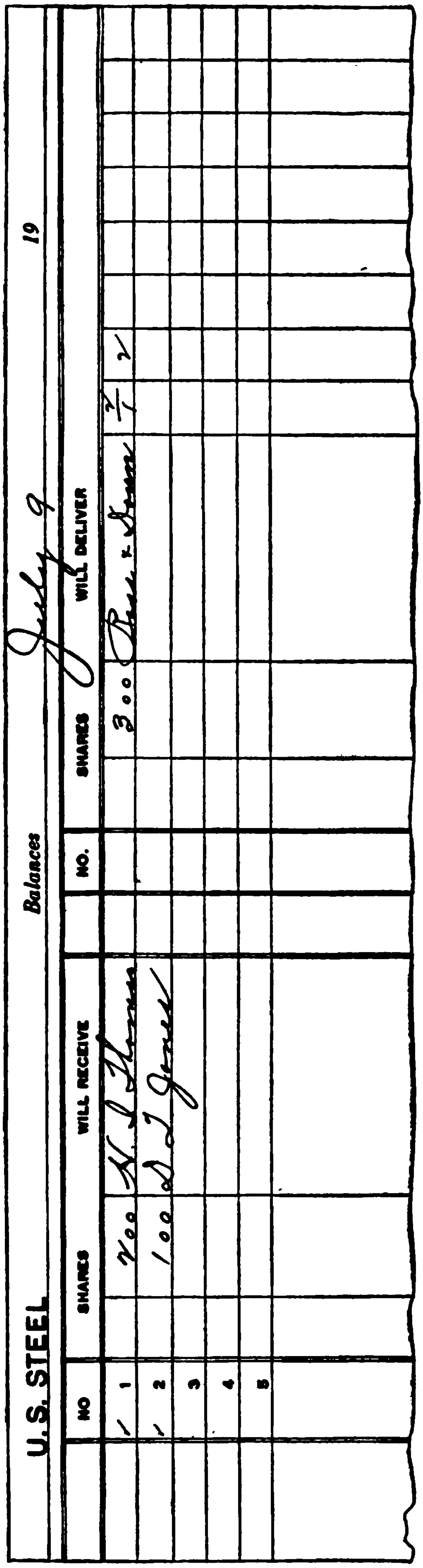
If there is a balance to deliver, as in this case, it is carried to the Receive side and entered as shown. The price entered in the price column is the Clearing House price, and the extension is figured at that price. Should the balance be to receive, then it is correspondingly carried to the Deliver side and entered in a similar manner, all cash entries in the price and amount columns being figured at the Clearing House settlement price.

80. Balancing for Cash.—To balance the sheet for cash, all that is necessary is to foot the amount columns after all stock balances have been entered completely. Should the receive footing be greater than the deliver footing, then a loss has been sustained, and a check must be sent to the Clearing House for the amount. However, should the deliver footing be the larger, then a gain has been registered, and a draft for the balance would be submitted to the Clearing House. This draft would be signed by one of the managers of that organization and returned about noon of the following day after the sheet has been sent to the Clearing House.

Having balanced the sheet completely, and having satisfied himself that it is correct, the broker sends it to the Clearing House, along with the exchange tickets, stock balance tickets, and the check or draft, as the case may be. The sheet must be in the Clearing House by not later than 7:00 P. M. of the day on which the business recorded was done.

81. The Auditing Department.—The sheet being received in the Clearing House, the first operation is that of checking the stock balance tickets with the stock balances as noted on the sheet. At the same time, the amount of the check or draft is checked with the cash balance as recorded on the sheet.

Clerks known as examiners then check all the extensions of the balances of the stocks and prove the amount columns for addition. While this is being done, the exchange tickets are taken and sorted so that all the tickets issued by any one broker



U.S. STEEL — Balances — July 9 19

NO.	SHARES	WILL RECEIVE	NO.	SHARES	WILL DELIVER
1	200	H. I. Thomas		300	Ross & Doun
2	100	D. T. Jones			
3					
4					
5					

Fig. 22

are in one box. Then every entry on the sheet is checked with these tickets, as to cash, kind of stock, and name of the broker to whom the stock was sold or from whom it was bought.

While these other operations are going on, the balance tickets are entered on allotment sheets, which have the form shown in Fig. 22. As there shown, Ross & Doun have a stock balance to deliver of 300 U. S. Steel, while H. I. Thomas has a stock balance of 200 U. S. Steel to receive and D. T. Jones a balance of 100 U. S. Steel to receive. Then from the allotment as shown, Ross & Doun will deliver to No. 1, on the receive side, 200 U. S. Steel and to No. 2, 100 U. S. Steel and these allotments are entered on their balance ticket.

On the following morning the balance tickets are returned to Ross & Doun, who proceed to deliver the stocks according to the memoranda there shown. Thus, according to the ticket shown in Fig. 21, they would deliver 200 shares of U. S. Steel to H. I. Thomas and 100 shares to D. T. Jones.

From these operations as explained, it is readily seen that through the Clearing House

operation the deliveries on transactions are cut down so that only balances are necessary to be delivered.

It is also seen that consequently the checks for individual transactions are not necessary, for checks are used in payment for stock balances *to receive* only, thereby reducing the certifications at the banks as well as reducing the amount of detail office work.

ACCOUNTS FOR STEAM ROADS

(PART 1)

INVESTMENT IN ROAD AND EQUIPMENT

INTRODUCTION

1. The capital stock and bonds of a company are generally issued for the purpose of constructing and equipping the road and furnishing the working capital required until the revenues are sufficient to meet the expense of the operation. The expense and revenue resulting from a partial operation while a road is under construction must be included in the construction accounts as provided by the classification. The amount of capital that may be issued for the purpose of construction is not limited by any federal law, neither is there any power granted to any federal body for the supervision or control of the issuing of capital by railroad companies. The cost per mile of line will vary greatly in accordance with the nature of the country traversed and the cost of labor and materials.

2. Payment for Construction.—The procedure for constructing a railroad is not always the same. In some cases, the road is built by a contracting party and is turned over to the railroad company ready for operation; the contracting party in

this case may receive for the construction work stock and bonds issued by the railroad company. Sometimes, companies issue stock and bonds and, by a cash payment, purchase a road built by some other company; in this case, if the original records of the cost of construction are not available, the entire amount of the purchase price is charged to an account, such as Cost of Road Purchased. Comparatively few of the larger railroad systems constructed the entire mileage owned or operated in the system. In most cases, the system is composed of many small roads that were consolidated and joined by connecting links. At present, many of the systems own or operate thousands of miles of road under one management.

3. Some of the original small roads were constructed during a period when the methods of accounting were not considered of such importance as at the present time, and as a consequence the records of the original cost of construction were, in some cases, lost or kept in such a way that it is now impossible to classify the investment in accordance with the present classifications. Therefore, it is impossible to state with any degree of accuracy the amount of stock and bonds actually issued for the purpose of original construction. It is known that in many cases stock was given as a bonus with the bonds sold for construction purposes, and in other instances stock was issued free to promotors and the cost of construction was provided for by the issue of bonds.

A fact that should receive very serious attention and be properly considered is the market value of securities issued by the constructing company at the time and under conditions when the actual construction work was performed.

Some states have enacted laws granting a railroad commission the power of regulating the issue of the stocks and bonds of railroad companies.

4. Construction and Equipment Accounts.—The construction and equipment accounts of a railroad are charged as follows: (1) Cost of the original construction of a new line; this is usually paid for by an issue of stocks and bonds. (2) Cost of new lines or extensions of the original line; such cost

may be paid for by an issue of stocks or bonds, or out of cash, or from special appropriations; such investments during the year are included in the total investment. (3) Cost of additions and betterments to road and equipment; this may be paid for from cash, special appropriations, or securities issued; investments for additions and betterments are included in the total investment in the road and equipment.

The first work performed in the original construction of a railroad is the purchase of the right of way, grading, purchase and laying of ties, rails, etc., and the erection of buildings and the purchase of equipment. Nearly all payments on account of expenditures for road and equipment are made by vouchers and the amounts are distributed to the respective accounts through the voucher register.

5. After the original construction of a road is finished and the road is turned over to the operating company for operation, any expense for construction work to extend the original road or to form a new line should be charged to the construction accounts, and the amounts expended during a year must be stated separately in the carrier's annual report. The total debit to each construction account is added to the amount previously debited and a total for each account is shown, as well as a total for the entire cost of the road.

NEW INVESTMENT CLASSIFICATION

6. On July 1, 1914, a new Classification of Investment of Road and Equipment of Steam Roads went into effect. In presenting this classification for use, the Interstate Commerce Commission issued the following introductory letter:

TO ACCOUNTING OFFICERS OF STEAM RAILWAYS:

This Classification of Investment in Road and Equipment supersedes the Classification of Expenditures for Road and Equipment, first revised issue, effective July 1, 1907, with the Supplement thereto, effective July 1, 1908, and also the Classification of Expenditures for Additions and Betterments, first revised issue, effective July 1, 1910. It also supersedes conflicting instructions contained in Accounting Bulletin, No. 8.

The plan of merging the accounts of expenditures for additions and betterments with the accounts for investment in road and equipment provides that carrier's records shall be kept in such form that the expenditures for additions and betterments may be reported separately from those for original road, original equipment, and road extensions.

Distinct accounts have been provided for the investment in several classes of buildings which, under the former Classification, were included in the account Miscellaneous Structures.

The general and special instructions contain a comprehensive statement of the principles underlying the Classification, indicating generally the application of the accounting rules. The attention of accounting officers is called to the importance of requiring all employes who are assigned to accounting work in connection with investment in road and equipment to familiarize themselves thoroughly with these instructions.

In the preparation of the revision of the accounting rules contained in this and other Classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of the Association of American Railway Accounting Officers, and of its Standing Committee on Corporate, Fiscal, and General Accounts.

The Classification, in tentative form, was presented for criticism and suggestions to the chief accounting officer of each railway and to the railway commissions of the several States. All suggestions received from such parties have been given careful consideration and many of them have been incorporated in the Classification as here issued.

PRIMARY ACCOUNTS

7. Division of Accounts.—The accounting system prescribed in this classification provides for three general classes of accounts—road, equipment, and general expenditures—each of which is subdivided into primary accounts as follows:

ROAD

1. Engineering
2. Land for transportation purposes
3. Grading
4. Underground power tubes
5. Tunnels and subways
6. Bridges, trestles, and culverts
7. Elevated structures
8. Ties
9. Rails
10. Other track material
11. Ballast
12. Track laying and surfacing
13. Right-of-way fences
14. Snow and sand fences and snowsheds
15. Crossings and signs
16. Station and office buildings
17. Roadway buildings
18. Water stations
19. Fuel stations
20. Shops and enginehouses

21. Grain elevators
22. Storage warehouses
23. Wharves and docks
24. Coal and ore wharves
25. Gas-producing plants
26. Telegraph and telephone lines
27. Signals and interlockers
28. Power dams, canals, and pipe lines
29. Power-plant buildings
30. Power-substation buildings
31. Power-transmission systems
32. Power-distribution systems
33. Power-line poles and fixtures
34. Underground conduits
35. Miscellaneous structures
36. Paving
37. Roadway machines
38. Roadway small tools
39. Assessments for public improvements
40. Revenues and operating expenses during construction
41. Cost of road purchased
42. Reconstruction of road purchased
43. Other expenditures, road
44. Shop machinery
45. Power-plant machinery
46. Power-substation apparatus
47. Unapplied construction material and supplies

EQUIPMENT

51. Steam locomotives
52. Other locomotives
53. Freight-train cars
54. Passenger-train cars
55. Motor equipment of cars
56. Floating equipment
57. Work equipment
58. Miscellaneous equipment

GENERAL EXPENDITURES

71. Organization expenses
72. General officers and clerks
73. Law
74. Stationery and printing
75. Taxes
76. Interest during construction
77. Other expenditures, general

8. Handling of Primary Accounts.—The proper handling of these accounts is explained in the special instructions given in connection with each account and in fourteen paragraphs of general instructions as follows:

Accounts for investment in road and equipment, items to be charged, basis of charges, cost of construction, excavated material, items to be credited, property retired and replaced, property retired and not replaced, equipment retired, land retired, adjustments for converted property, expenses in connection with additions and betterments, interpretation of item lists, submission of questions.

A close study of each paragraph in the general instructions will bring out many important features. For example, the second paragraph deals with the construction of the original road and original equipment, also the construction of new road

that was in the original plan but the construction of which was deferred, as well as the purchase of the equipment for it. It also deals with fixed improvements, such as tunnels, bridges, buildings, earthworks, etc.; with additional facilities, such as additional equipment, tracks, buildings, bridges, and other structures; and with betterments, which improve the existing facilities through the substitution of superior parts for inferior parts retired. While these are presented clearly, without close analysis they will be more or less confusing.

9. Original Investments.—In the investment accounts a distinction is made between original investments, additions, and betterments, and the records must be kept with sufficient care that expenditures for additions and betterments may be reported separately from those for original road, original equipment, and road extensions, and will show separately the expenditure under each authorized addition and betterment.

Original investment includes cost of land, bridges, buildings, tunnels, earthworks, etc. provided and arranged for under the original plan for the construction of a new road or construction of extensions of existing main lines, additional branch lines, and extensions of existing branch lines. Also rolling stock, boats, highway vehicles, etc., when provided and arranged for under the original plan for the construction of a new road, are classed as original investment. Equipment purchased on account of increased mileage of tracks is not classed as original investment but as additions.

Original road and road extensions shall not be construed to include fixed improvements that under the original plans for the roads or extensions it is proposed to substitute, at some time subsequent to the beginning of commercial operations, for the improvements originally installed and used for transportation operations, such as steel bridges substituted for trestles.

10. Additions and Betterments.—Under the head of additions come also additional facilities, such as additional tracks, equipment, buildings used in connection with transportation, bridges, additions to buildings, extensions to tracks, additional ties laid in existing tracks, air brakes applied to cars

not previously thus equipped, etc. When the acquisition of equipment under the original plan is deferred, such equipment, when acquired, shall be considered as additions.

Betterments are improvements of existing facilities through the substitution of superior parts for inferior parts retired, such as the substitution of steel-tired wheels for cast wheels under rolling stock. The cost chargeable to betterments is the excess cost of new parts over the cost, at current prices, of new parts of the kind retired.

11. When entering investment items, care should be taken not to include items showing investment in property not devoted to transportation, as such items appear in the balance sheet under the heading Miscellaneous Physical Property.

PRIMARY ACCOUNTS REQUIRING SPECIAL STUDY

12. Usually the name of a primary account will clearly indicate its use. There are primary accounts under each general account, however, that require special study, for there may be items chargeable to them that at first it may be thought should be charged to some other account; also, there may be some items that it would seem should be charged to them that by the general or special instructions of the classifications must be charged to another account. Under this general account, a few of the primary accounts requiring special study are the following:

13. Account No. 1, Engineering.—Account No. 1 includes the pay and expenses of engineers, assistants, and clerks engaged in the survey and construction of new lines and extensions, and in making additions and betterments of the carrier's road, including wharves and docks. When, however, such employes are engaged in the maintenance of road their pay and expenses must be charged to operating expenses. If they are engaged in preliminary surveys, such expense must be carried in a suspense account until it is determined whether the work shall continue or not. If the work is continued, the preliminary expense must be transferred to the proper account for the work;

but if the plan is abandoned, this preliminary expense must be transferred to operating expenses, income, or profit and loss, as may be appropriate. As a result, the handling of pay and expenses in this department must oftentimes be distributed to other accounts the same as in industrial cost accounting.

14. Account No. 6, Bridges, Trestles, and Culverts. Account No. 6 includes the cost of substructures and superstructures that carry the tracks of the carrier over water courses, highways, and other railways. When, however, a bridge or trestle is converted, by filling, into an earth embankment, the value of the structure so used must be adjusted between this account and accounts for grading, and operating expenses. Another peculiarity in connection with this account is that while the cost of bridges over under-grade crossings including the necessary piers and abutments for sustaining the bridges shall be charged to this account, the cost of under-grade roadways, paving on right of way, drainage systems, and retaining walls outside of the bridge abutments is to be charged to Account No. 15, Crossings and Signs.

15. Account No. 12, Track Laying and Surfacing. The cost of distributing, laying, and adjusting ties and other track materials used in construction of structures including repair tracks for the movement or storage of locomotives or cars is chargeable to Account No. 12, but not the cost of tracks for car floats or temporary tracks. The cost, however, of handling track material for repairs, both when such material is replaced in kind and when replaced with improved or heavier material, is chargeable to operating expenses. Therefore, repairs are to be paid for from revenue and not to be confused with construction costs.

16. Account No. 15, Crossings and Signs.—To Account No. 15 is charged the cost of constructing farm passes, highways, and other railway crossings across the carrier's right of way, except railways crossing at grade. The cost of bridges or trestles carrying tracks over roads, highways, or other railways is to be charged to Account No. 6, Bridges, Trestles,

and Culverts. The cost of a bridge or other structure that carries farm passes, highways, or the tracks of another carrier over the accounting carrier's tracks is to be included in this account. But it is necessary to notice that a bridge taking the accounting carrier's tracks over the tracks of another carrier is charged to bridges, while a bridge built by the accounting carrier to carry the tracks of another, over the accounting carrier's tracks is charged to the account, Crossings and Signs. The cost of shop and station over-grade foot-bridges and subways not public highways are to be included in the cost of the building.

17. Account No. 16, Station and Office Buildings. To Account No. 16 is charged the cost of station and office structures, including the fixtures, furniture, etc. necessary first to equip the building for use. But buildings used exclusively in connection with the maintenance of way are to be charged to Account No. 17, Railway Buildings; and those used exclusively in connection with the maintenance of equipment are to be charged to Account No. 20, Shops and Engine Houses.

The cost of grading and preparing grounds both before and after the construction of the station and office building, including the cost of sidewalks, driveways, etc., should be charged to the cost of the building, but the cost of restoring the grounds after addition and betterment work must be charged to the appropriate operating expense account. The cost of permanent water rights should be included in the cost of the building.

18. Account No. 23, Wharves and Docks.—Account No. 23 includes wharves, docks, dry docks, slips, float bridges, and other landings including the dredging and float bridge machinery, etc., except that the cost of coal and ore wharves and docks is charged to Account No. 24, Coal and Ore Wharves.

The cost of the land on which wharves are built and the cost of riparian rights are not charged to this account but to Account No. 2, Land for Transportation Purposes. The cost of buildings located on the wharves is to be charged to the accounts appropriate for the class of building.

19. Account No. 27, Signals and Interlockers. Account No. 27 includes the cost of interlocking and other signal apparatus for governing the movement of trains, including the towers and other buildings in connection therewith. If, however, the apparatus is located in a station building, the entire cost of the building should be included in Account No. 16, Station and Office Buildings.

20. Account No. 32, Power Distribution Systems. Account No. 32 includes the cost of distribution systems, whether overhead, surface, or underground, for conveying low-tension electric power from producing plants or transformer stations to trains and cars, or for power, heat, light, or general purposes.

The cost of distribution systems located in shop buildings, or station and office buildings, should be included in the cost of the building. The cost of distribution systems used exclusively for operating signals and interlockers shall be charged to Account No. 27, Signals and Interlockers.

When the electric current generated or received is changed by means of converters, generator sets, or static transformers, that portion of the line or outside conductor system carrying current of other than the operating kind of voltage should be classed as transmission system, and all of its expense charged to Account No. 31, Power Transmission Systems; but when the electric current is generated or received and used substantially unchanged in voltage and kind, the line or outside conductor system shall be classed wholly as a distribution system.

21. Account No. 36, Paving.—Account No. 36 is to be charged with the cost of paving about tracks in public highways through which the carrier's tracks are laid. The cost of paving upon the carrier's lands within the grounds of buildings or other structures must be charged to the accounts provided for the costs of those structures; and the cost of paving upon the carrier's right of way at crossings must be charged to Account No. 15, Crossings and Signs.

In the handling of the expense for paving is shown the thoroughness with which the Commission has gone into detail in

the division of costs in connection with the laying out of this classification.

22. **Account No. 45, Power-Plant Machinery.**—The cost of machinery and other apparatus for generating power in power plants used for the operation of trains and cars, or for furnishing power, heat, and light for stations, shops, or general purposes, including the cost of special foundations and installations, must be charged to Account No. 45. The cost of foundations other than those special to particular machines and other apparatus shall be included in the cost of the building and not in this account.

Power machinery installed in a shop as a part of the shop equipment must, however, be charged to Account No. 44, Shop Machinery. Power machinery and other apparatus installed in stations and offices solely for use there shall be included in Account No. 16, Station and Office Buildings. Power machinery and apparatus in plants used solely for operating signals must be charged to Account No. 27, Signals and Interlockers.

EQUIPMENT

23. The several primary accounts under the general equipment account are designed to show the cost of the several classes of equipment owned by the carrier, or held under equipment-trust agreements for purchase. The appropriate primary account shall be charged with the cost of all equipment, the costs of additions, and the excess cost of betterments. The cost of removing the old appliances and applying the improvements shall be charged to operating expenses.

The ledger value of each unit of equipment shall be credited to the appropriate equipment account when it is retired from service. The amount of this credit shall be concurrently charged as follows:

The amount of the balance-sheet accrued depreciation account with respect to the equipment thus retired shall be charged to that account; the salvage recovered shall be charged to the materials and supplies account or elsewhere, according to the purpose for which used; the amount of depreciation prior to July 1, 1907, not previously written off or provided

for, shall be charged to profit and loss; and the remainder shall be charged to the appropriate operating expense account for equipment retired. The cost of demolishing the equipment, if demolished by or for the carrier, shall be charged to the appropriate operating expense account for equipment retirements.

When the cost of the renewals to be made to any unit of equipment will constitute the major portion of its value as renewed, the equipment, when taken out of service, shall be considered as retired and accounted for as provided in the preceding paragraph, and for the purpose of this classification the renewed equipment shall be considered an addition and the appraised cost thereof shall be included in the account appropriate for the cost of the equipment. In no case shall the charge for the renewed equipment exceed the cost (at current market prices of labor and material) of new equipment of similar type, equal capacity, and equal expectation of life in service, less a suitable allowance on account of the second-hand parts remaining therein.

When an important addition and betterment project or the construction of new lines necessitates the purchase of equipment to be used exclusively therein, the cost of such equipment shall be included in the accounts representing the cost of the work, and no charge shall be made to operating expenses for depreciation on such equipment while the cost remains so charged. The amount realized from any subsequent sale, or the appraised value of the equipment retained after the completion of the special work for which it was purchased, shall be credited to the accounts charged with its cost. The appraised value of such equipment retained shall be debited to the appropriate primary account herein, and thereafter, for the purposes of accounting, such appraised value shall be considered as the cost of the equipment.

When second-hand equipment acquired is in such physical condition that it is necessary to make extensive repairs to it to bring it up to the standard required by the carrier, the cost of such repairs shall be included in the account appropriate for the cost of the equipment. A comprehensive statement of the amount estimated to be necessary to rebuild second-hand equipment in accordance with the above provision shall be furnished to the Commission as soon as the estimate is made.

GENERAL EXPENDITURES

24. The primary accounts of the general expenditures account are designed to include expenditures made in connection with the acquisition and construction of original road and equipment, and with extensions, additions, and betterments, to road and equipment property, when such expenditures cannot properly be included in any of the foregoing accounts as a part of

the cost of any specific work. When assignable, such expenditures shall be included in the cost of the property in connection with which the expenditures occur.

25. Account No. 71, Organization Expenses. Account No. 71 shall include all fees paid to governments for the privilege of incorporation, and office and other expenditures incident to organizing the corporation and putting it in readiness to do business; cost of preparing and distributing prospectuses; cost of soliciting subscriptions for stock; cash fees paid to promoters, and the actual cash value (at the time of the organization) of securities paid to promoters for their services in organizing the enterprise; special counsel fees; cost of preparing and issuing certificates of stock; cost of procuring the necessary certificates from State authorities; and other like costs. The cost of soliciting for loans or for the sale of bonds or other evidences of indebtedness, however, shall be charged to the balance-sheet Account No. 725, Discount on Funded Debt.

26. Account No. 76, Interest During Construction. The handling of Account No. 76 is so important that all that is said in the classification under this account is given here. It is as follows:

When any bonds, notes, or other evidences of indebtedness are sold, or any interest-bearing debt is incurred for acquisition and construction, of original road and equipment, extensions, additions, and betterments, the interest accruing on the part of the debt representing the cost of property chargeable to road and equipment accounts (less interest, if any, allowed by depositaries on unexpended balances) after such funds become available for use and before the receipt or the completion or coming into service of the property so acquired shall be charged to this account.

When such securities are sold at a premium, the proportion of such premium assignable to the time between the date of the actual issuance of the securities and the time when the property acquired or the improvement made becomes available for service shall be credited to this account.

This account shall also include such proportion of the discount and expense on funded debt issued for the acquisition of original road, original equipment, road extensions, additions, and betterments, as is equitably assignable to the period between the date of the actual issuance of securities and the time when the property acquired or the improvement made becomes available for the service for which it is intended. The proportion

of discount and expense thus chargeable shall be determined by the ratio between the period prior to the completion or coming into service of the facilities or improvements acquired and the period of the entire life of the securities issued.

This account shall also include reasonable charges for interest during the construction period before the property becomes available for service, on the carrier's own funds expended for construction purposes.

NOTE A.—Interest on bonds, notes, or other evidences of indebtedness accruing before the proceeds from the sale of the securities becomes available for use shall not be included in this account, nor shall there be included any interest accruing after the property with respect to which the proceeds are expended is received or becomes available for use in connection with commercial service.

NOTE B.—If any securities which have been issued or assumed by the carrier are sold or exchanged by or for the carrier for a consideration the actual money value of which at the time of such sale or exchange is less than the value of the securities at par and the accrued interest thereon, if any, the difference between the money value of the consideration received and the par value of the securities plus the accrued interest shall be deemed a discount. In no case (except as provided in the third and fourth paragraphs of this account) shall discounts be included as part of the cost of anything charged to any account prescribed in this classification.

NOTE C.—For definition of securities *actually issued*, see Note B, under general balance-sheet Account No. 755, Funded Debt Unmatured.

NOTE D.—Whenever interest, premium, or discount assignable to the construction period is incurred in connection with an expenditure covered by some specific road and equipment account or accounts, such interest, premium, or discount shall be charged directly to the specific account to which it is related.

STUDY OF CLASSIFICATION

27. Sent with this Instruction Paper is a copy of the Classification of Investment in Road and Equipment of Steam Roads, effective July 1, 1914. This pamphlet should be studied as a part of this lesson, the same as if it were reprinted within the pages of this Instruction Paper. Study not only the general instructions but also the matter concerning each general and primary account, paying close attention to the notes under many of the accounts, as it is in these notes that the fine points are brought out. Analyze for yourself each account along the line of the few mentioned under the general headings in this Section.

It is not necessary that any part of this classification be committed to memory but it should be so thoroughly studied that the close association of the different accounts will be clearly understood as well as the nature of each in itself.

The Examination Questions that follow are to be answered from the information in the classification pamphlet. No difficulty will be encountered in doing so if the foregoing directions are carefully followed.

ACCOUNTS FOR STEAM ROADS

(PART 2)

OPERATING REVENUES AND OPERATING EXPENSES

PRELIMINARY REMARKS

1. The operating-expense accounts cover all expenses resulting from the operation of the road and such expenses as are incident thereto and are not separable from the rail operations.

On July 1, 1914, a new Classification of Operating Revenues and Operating Expenses of Steam Roads went into effect. In presenting this classification for use, the Interstate Commerce Commission issued the following introductory letter:

To Accounting Officers of Steam Railways:

This Classification of Operating Revenues and Operating Expenses supersedes the Classification of Operating Revenues, first issue, effective July 1, 1907, and the Supplement thereto, effective July 1, 1908; the Classification of Operating Expenses, third revised issue, effective July 1, 1907, and the Supplement thereto, effective July 1, 1908; and the Classification of Revenues and Expenses for Outside Operations, first issue, effective July 1, 1908. It also supersedes conflicting instructions contained in Accounting Bulletin No. 8.

Accounts are provided in this classification for the revenues and expenses of operations which heretofore have been classed as auxiliary or outside operations. The purpose in merging these accounts has been to secure a statement of revenues and expenses in connection with the operation of all physical property, the cost of which is includible in the accounts for investment in road and equipment.

The accounts for maintenance of physical property have been arranged to correspond with those for the investment in such property. Depreciation accounts have been provided for the current depreciation of fixed improvements, although until further directed the recognition in operating expenses of current depreciation of fixed improvements is optional with the carrier. It is provided that organization and general administration expenses directly assignable to investments in stocks, bonds, and other securities shall be excluded from the accounts of this classification and included in Income Account No. 549, Maintenance of Investment Organization.

The general and special instructions contain a comprehensive statement of the principles underlying the classification, indicating generally the application of the accounting rules. The attention of accounting officers is called to the importance of requiring all employes who are assigned to accounting work in connection with operating revenues and operating expenses to familiarize themselves thoroughly with these instructions.

In the preparation of the revision of the accounting rules contained in this and other classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of the Association of American Railway Accounting Officers and of its Standing Committee on Corporate, Fiscal, and General Accounts.

The classification, in tentative form, has been presented for criticism and suggestions to the chief accounting officer of each railway and to the railway commissions of the several States. All suggestions received from such parties have been given careful consideration, and many of them have been incorporated in the classification as here issued.

2. This classification calls for the use of eight general accounts which control primary accounts as follows:

Maintenance of way and structures, which is divided into seventy-nine primary accounts.

Maintenance of equipment, which is divided into thirty-seven primary accounts.

Traffic, which is divided into nine primary accounts.

Transportation, rail line, which is divided into fifty primary accounts.

Transportation, water-line, which is divided into three primary accounts.

Miscellaneous operations, which is divided into six primary accounts.

General, which is divided into twelve primary accounts.

Transportation for investment, credit, which is not subdivided.

3. The handling of the accounts in this classification is governed by notes in connection with the primary accounts and by general and special instructions given separately in the pamphlet. Under the special instructions are given the following, which are of special importance:

ACCOUNTS FOR OPERATING EXPENSES.—The accounts prescribed for operating expenses are designed to show expenses of furnishing transportation service, including the expenses of maintaining the plant used in the service. The accounting shall be as nearly as practicable upon the basis of accruals; however, the option is allowed the carrier of omitting charges to the accounts provided for the depreciation of fixed improvements and of including the depreciation (ledger value less salvage) of such property in the appropriate repair accounts at the time the property is converted or retired for replacement.

Fixed improvements means structures which are fixed as to location, such as tunnels, bridges, buildings, earthworks, etc.

MAINTENANCE EXPENSES.—The accounts provided for maintenance of fixed improvements and of equipment are designed to show the cost of repairs and also the loss through depreciation of the property used in operations, including all such expenses resulting from ordinary wear and tear of service, exposure to the elements, inadequacy, obsolescence, or other depreciation, or from accident, fire, flood, or other casualty.

The difference between the depreciation upon fixed improvements retired and replaced and the amount provided for through the depreciation accounts, shall be included in the repair accounts when the property is retired. Similar adjustments on account of equipment retired shall be included in the accounts for equipment retirements. (See classification of investment in road and equipment, general account II, Equipment.)

DISTRIBUTION OF CHARGES FOR PROPERTY RETIRED AND REPLACED. In case the amount chargeable as operating expenses for property retired and replaced, (as provided for in section 7 of the general instructions for the classification of investment in road and equipment) is relatively large and its inclusion would seriously distort the expense accounts for a single year, the carrier, if so authorized by the Commission, may charge the amount thereof to Balance-Sheet Account No. 726, Property Abandoned Chargeable to Operating Expenses, and distribute it thereafter, in accordance with the provisions of that account to the operating expenses of succeeding years.

If so authorized by the Commission, the carrier may charge to profit and loss any extraordinarily large item representing the cost of property retired and replaced, instead of charging such item to operating expenses. The carrier shall file with the Commission a statement of the cost and a description of the property retired and the reasons which, in its judgment, indicate the propriety of charging the cost of such property to profit and loss.

DEPRECIATION OF FIXED IMPROVEMENTS.—Depreciation accounts, in which to include uniform monthly charges to cover the depreciation of fixed improvements, have been provided for the purpose of creating reserves which will meet or reduce the amounts otherwise chargeable, as may be appropriate, to operating expense or to profit and loss accounts to cover property retired. Such depreciation charges shall be based in each instance upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of the property determined to be equitable by the carrier's experience and best sources of information as to the actual current loss from depreciation. A statement of the bases used by the carrier for computing these charges shall be included in its annual report to the Commission. Until further directed, the use of depreciation accounts for fixed improvements is optional with the carrier.

EQUALIZATION OF EXPENSES.—For the purpose of equalizing the monthly charges for the repairs of fixed improvements and equipment, the carrier may include each month in the appropriate primary repair accounts a uniform proportion of the amount of authorized estimates of such expenses for the fiscal or calendar year. In a like manner, the authorized estimates of expenses on account of personal injury or loss and damage liability, for stationery or printing, and for advertising may be equalized in the monthly accounts for the fiscal or calendar year. If the carrier has been unable to carry out its program for repairs and does not adjust its accounts to conform to the actual expenditures, it may carry forward the balances and treat them as provided in section 20, relating to balances in operating reserves. If, on account of claims for personal injury or loss and damage being unsettled at the close of the year, the accounts for such expenses are not adjusted, the balances carried forward in the operating reserve account shall be analyzed as also provided for in section 20 of these instructions.

Charges for stationery and printing, and for advertising, for a fiscal or calendar year shall be adjusted to the actual expenses.

BALANCES IN OPERATING RESERVES.—If, at the end of a fiscal year, balances remain in operating reserves, the carrier shall indicate in detail in a formal report to the Commission the amounts therein, and the conditions causing the carrying forward of such balances, except as to balances applicable to personal injury or loss and damage liability, for which balances the carrier shall preserve in its files the details upon which such estimates were based. Separate records shall be kept of the operating reserve accounts for each year.

DEPRECIATION

4. The classification provides that monthly charges shall be made to operating expenses on account of depreciation of property and equipment. Even when property is kept in an apparently good state of repair, the constant use and time will slowly cause a condition when a complete new piece of property or equipment will be necessary. To provide for such a condition, operating expenses are charged monthly with amounts based on a percentage found to be the average necessary to create a reserve that will equal the cost of the property or equipment during the average time such property or equipment will be good for the service of the company.

Operating expenses are usually considered to be amounts paid from a company's cash on account of labor, materials, etc.; however, in the matter of depreciation, the amounts charged to the operating expense accounts do not affect the cash account but are credited to a reserve account in the general ledger, and the total of such reserve account is deducted from the cost of equipment or other property as entered on the credit side of the balance sheet.

5. The **equipment depreciation register,** illustrated in Fig. 1, shows how a record is made of all equipment placed in service and the manner of arriving at the depreciation. The columns headed Date Placed in Service shows the time the equipment was placed in service; the depreciation is charged from this date. The column headed No. of Cars or Locomotives shows the number of each class placed in service at one time. In the column headed Class is entered the name of the class, as box, flat, gondola, stock, etc. The column headed Original Cost shows the original cost of each car; the depreciation is figured on the basis of this amount. When equipment which is not new and which therefore already has a depreciated value is placed in service, its value is entered in the column headed Dep. Value. In the column headed Depreciation Ceases is entered the date when depreciation charges will cease; that is, the date when the amount charged for depreciation is equal to the original

THE A. B. RAILROAD COMPANY

EQUIPMENT DEPRECIATION REGISTER

Date Placed in Service		No. of Cars or Locomotives	Class	Original Cost	Dep. Value	Depreciation Ceases		Date Destroyed, Sold, or Changed		Amount of Depreciation	Amount of Salvage	Amount Chargeable to Expenses	Per Cent.
Month	Year					Month	Year						
Feb. 1	1907	3,500	Flat	$ 653 00				Nov. 1	1912	$ 150 19	$ 424 99	$ 77 82	4

FIG. 1

cost of the equipment, after which no further depreciation charges are to be made. In the column headed Date Destroyed, Sold, or Changed is entered the date when equipment is retired from service on account of being destroyed, sold, or changed from one class to another, as the changing of a box car to a flat car, etc. The column headed Amount of Depreciation is for the total amount of depreciation charged to operating expenses from the time the equipment was put in service to the time it was retired. The column headed Amount of Salvage is for amounts received from the sale of old or retired equipment or parts of it. When a car is retired from service, the sum of the amount charged to depreciation and the amount received for salvage is deducted from the original cost and the difference is entered in the column headed Amount Chargeable to Expense.

The equipment depreciation register, therefore, constantly shows the value of the equipment in service, as the amount of cost of

old equipment retired will be constantly deducted and the cost of any new equipment will be added to the total.

6. The entry in the equipment depreciation register of Fig. 1 shows that a series of flat cars were placed in service Feb. 1, 1907, and the original cost of each of these cars was $653. One of the cars was retired from service on Nov. 1, 1912, having been in the service for the period of 5 years and 9 months. The company's records would show that the average life of this class of cars is 25 years, and to charge depreciation with the full amount of the original cost in that time, a charge of 4 per cent. per annum was made to operating expenses. This particular car was in the service only 5 years and 9 months, and at the rate of 4 per cent. per annum based on the original cost of $653, during that time $150.19 would have been charged to operating expenses on account of depreciation. When the car was retired from service it was sold for $424.99; this salvage and the amount of $150.19, the charge for depreciation, makes a total of $575.18 to be credited to the account as against the original cost of $653, and the difference of $77.82 is debited to the operating expenses as equipment retired in accordance with the classification.

7. The handling of depreciation accounts in this way prevents an exceptionally large debit to operating expense accounts at any particular time, but causes a gradual charge to such accounts, and when equipment or other property on which depreciation has been accrued is retired from service the capital accounts will reflect the true condition of the value of the road and other property, the cost of which has been charged to the road and equipment accounts.

Operating expenses	$25,000	
Depreciation reserve		$25,000

Entry made to debit operating expenses and to credit depreciation reserve accounts with one-twelfth of annual depreciation charge.

Fig. 2

As the operating expense accounts are closed monthly, one-twelfth of the annual amount will be charged to the various

depreciation accounts under operating expense accounts each month, and the charges will cease when the equipment is retired or the charges equal the original cost.

8. When the depreciation on all classes of equipment in service has been figured at the adopted rate basis for each class, the total amount of depreciation is debited to the operating expense accounts and credited to the depreciation reserve account through a journal entry as shown in Fig. 2.

OPERATING EXPENSES ON ACCOUNT OF WAGES PAID EMPLOYES

GENERAL REMARKS

9. A large part of the operating expense of a railroad results from the payment of wages to its employes. The payment of wages constitutes a labor expense peculiar to each department of the railroad organization, which makes it necessary to charge the amount paid to one employe to a different account than the amount paid to an employe in some other department.

The cost of material and supplies used by a railroad are usually paid for by voucher. The vouchers are summarized in the voucher register and the amounts debited to the proper accounts. The totals of the primary account are summarized to one total, which is debited to the general account in the general ledger.

The principle of the voucher system is also followed in the payment of the wages to employes, although pay rolls and checks are used for the detail work.

10. Some of the larger railroads find it convenient as well as necessary to keep the accounts of each division entirely separate, as if each division were a separate company. In this case there must be a division to show the amount to be charged to each division; this, in the case of a voucher, is shown on its face as well as the account to which the amount is to be charged.

Vouchers may be prepared by the various departments responsible for the expense and must be approved by the proper officers, but before the voucher is passed for payment to the payee it must be audited and approved by the auditor of disbursements or other accounting officer.

PAY ROLLS

11. The term **pay roll** is applied to a sheet on which are entered the names of the employes, the time worked for the month, the rate of pay, and the amount of wages due for the month.

The payment of the employes is a disbursement and must therefore be made only after the amounts have been properly audited and approved by the auditor of disbursements; however, the time of the employes and the necessary detail for entry on the pay rolls are usually kept and the rolls made up in the office of the division superintendent, the division engineer, the master mechanic, or the head of any department having the direct charge or supervision of employes.

The division superintendent, being in charge of the transportation service, in which the largest percentage of employes are engaged, will have expenses on account of the wages paid and chargeable to the operating expense accounts as follows: Superintendence, despatching trains, telegraph operators, station agents and employes, train masters, train conductors, brakemen, flagmen, etc.

TIME REPORTS

12. Station agents, division operators, and others report the time of employes in their departments on time books. These time books show the names of the employes and the position of each, and columns are provided for each day of the month, the total number of days worked, the rate, and the amount due. When employes are paid at a monthly rate, their time is indicated by a figure 1 for each day of the month worked. When employes are paid by the hour the number of hours worked each day is entered in the column showing the day of the month.

13. The time for trainmen is not kept in a time book but on a time card, which is made out for each train run. This card shows the date, the train and engine number, the point of starting and the time of leaving the point of destination and the time of arriving and the names of the engineer, fireman, conductor, flagman, and brakeman.

If the run is completed within the time limit allowed for the train run for which the time card is made, no other time need be entered; but if the train is delayed and requires longer than the regular time allowance, the number of hours of overtime must be shown on the card and a detailed report made of each delay and the cause. These time cards are forwarded at the end of each run to the division superintendent's office, where the timekeeper enters the time on the pay rolls.

14. Before the time reports from the agents, etc. reach the superintendent's office, the timekeeper has prepared the pay rolls from the previous month's rolls showing all the information such as the names of employes, etc., except the time worked for the current month. If any employes have left the service during the month their time will be shown as leaving the service, and on the next rolls the name is dropped and the names of new employes who were employed during the month will be added in their proper place on the rolls.

The rolls for the following month are completed as soon as possible after the rolls for the current month have been forwarded to the auditor of disbursements. In this way the time of the trainmen may be entered on the rolls daily on receipt of the time cards for each run.

PREPARATION OF PAY ROLLS

15. As soon as the names have been entered on the pay rolls, the time of the trainmen is entered daily as the time cards are received in the office. The time is entered for each day and the train runs are designated by letters that indicate the points between which the run was made. Before entering the time on the rolls, the time cards are checked against the train register sheets to see that the train has moved between

the points shown on the time card and that the time of departure and arrival are correct; this is very important when overtime is reported.

On account of the different runs resulting in different rates of pay, and in cases where a flagman has also made time as a conductor or a brakemen made time as a flagman, in some cases considerable work will be required at the close of the month to compute the amount of wages due.

Extra men are usually required to work on the pay rolls so that they may be prepared and forwarded to the auditor at the earliest possible date after the close of the month. The computations made by one man are checked by another in order to insure accuracy, and even after such care has been exercised errors will sometimes pass unnoticed until found by the auditor, who at once notifies the superintendent or other officer.

16. Deductions.—In cases where the company maintains a relief association for the benefit of employes to which they are required to contribute, the amount of such contribution is usually deducted from the amount of wages due the employe and is entered on the pay roll in a column provided for that purpose and the net amount of wages due the employe is then entered in the next column. Other deductions are sometimes made on the pay rolls from the amount due employes, as, for instance, for the rent of company houses, etc.

When all entries have been made and the amounts verified and totalled, the pay rolls are usually written with a typewriter in triplicate, then signed by the officers of the division, and forwarded to the auditor.

17. Pay-Roll Reports.—A pay-roll report, or pay-roll summary, is necessary to show the distribution of the amounts to the primary expense accounts. This report is made by the timekeeper, as he is the only one who has the necessary information. The report has a column for each primary operating transportation expense account, and a column is also provided for individuals and companies, so that amounts to be paid by some other individual or company are not entered in any of the operating expense columns but are entered in this column.

Thus, if the C. D. R. R. is to pay part of the expense of telegraph operators between certain points on the A. B. R. R. for use of the tracks, the A. B. R. R. will make its pay rolls show the full amount of wages due those operators but will charge its account with only the portion of the wages it is to pay; the portion the C. D. R. R. is to pay will be entered in the column headed Individuals and Companies, and a bill will be made against the C. D. R. R. for the amount.

If the first pay-roll sheet shows the names of only the superintendent and his assistants and clerks, the total of the sheet will be entered in the column provided for the total and also in the column headed Superintendence. If the second pay-roll sheet has the names of only the train despatchers and operators, the total will be entered in the total column and also in the column headed Despatching Trains, which is the primary operating expense account to which such wages should be charged. When a pay-roll sheet has entries chargeable to different accounts, such amounts must be segregated and each separate amount entered in the proper column in accordance with the classification of operating expenses.

18. Division Charges.—In many cases, the pay rolls of a large railroad made by the division superintendent will include the wages paid to employes on a subdivision and which must be separated from the payments and charges of the main division. This is provided for by entering the segregated amounts in the proper space at the bottom of the summary sheet.

The pay-roll report is made immediately after the pay rolls are finished and is forwarded to the auditor.

19. Auditing of Pay Rolls.—As soon as the pay rolls are received in the auditor's office, the entries are verified as to the correctness of all computations and totals. If errors are found, the officer in whose department the pay roll was made is immediately notified and requested to give correct information. When the pay rolls are approved and a check written for each employe shown on the rolls, the checks are verified with the amounts on the rolls and proved with a total, so that there will be no possibility of any error in the amount

paid out by the checks. After this has been done the checks and the original of the pay rolls are returned to the superintendent, and the paymaster pays the employes.

20. Accounting.—The amounts charged to the primary operating expense accounts in the superintendent's office, are used in the auditor's office in making a summary for the entire road, but they do not enter the account in the general ledger.

The principle of the voucher system again enters into the work. The check may be considered as part of the voucher although it is separate. The accounts entered in the general ledger are the general accounts showing the classification as transportation expenses, traffic expenses, etc.

A voucher will be made by the auditor for the purpose of making the journal entry, which will be made only for the total amount of the pay rolls of the transportation department, and the amount will be debited to the account of transportation expenses in the general ledger, except that the amount chargeable to individuals and companies will be charged to that account.

21. It can be readily understood that inasmuch as the payment of the wages shown on the pay rolls is made by a check and not in actual cash that the cash account cannot be credited with these amounts until the cash has been paid out; therefore, when the amounts are debited to the transportation expense account in the general ledger, they must be credited to a temporary account, which becomes a suspense, or clearing, account. As soon as the banks pay the checks, the treasurer's cash account is affected and the total of the checks paid must be credited to the treasurer's cash account in the general ledger and debited to the temporary or suspense account which had been previously credited. This temporary account will therefore be cleared as soon as all the pay-roll checks have been paid from the treasurer's cash. Any unpaid wages must be credited to and remain in an open account as a liability until finally paid or credited to the profit-and-loss account.

A journal entry as shown in Fig. 3 will then be made from the auditor's voucher.

The procedure is the same for the pay rolls of the different departments of a railroad. The total of the amounts charged

Transportation expenses	$50,000	
Individuals and companies	5,000	
Wages due		$55,000

Entry made to charge various accounts and credit wages due account with the amount of pay-roll checks of transportation department for month of............

FIG. 3

to the general expense accounts in the general ledger will form the total of the operating expenses, which is carried to the income account and deducted from the operating revenue, resulting in the net revenue.

STUDY OF CLASSIFICATION

22. There is sent with this Instruction Paper a copy of the Classification of Operating Revenues and Operating Expenses of Steam Roads, effective on July 1, 1914. This Classification is furnished in the original form so that the student may become familiar with the actual pamphlets used in railroad work. This pamphlet should be carefully studied in connection with this Instruction Paper. The questions that follow are based on the information contained in the Classification pamphlet.

ACCOUNTS FOR STEAM ROADS

(PART 3)

INCOME, PROFIT-AND-LOSS, AND GENERAL BALANCE-SHEET ACCOUNTS

1. On July 1, 1914, a new Classification of Income, Profit-and-Loss, and General Balance-Sheet Accounts for Steam Roads was made effective by the Interstate Commerce Commission. This classification is introduced by the following letter:

To Accounting Officers of Steam Railways:

This Classification of Income, Profit-and-Loss, and General Balance-Sheet Accounts supersedes the Form of Income and Profit and Loss Statement for Steam Roads, first issue, effective July 1, 1912, and the Form of General Balance-Sheet Statement, first revised issue, effective June 15, 1910. It also supersedes conflicting instructions in Accounting Bulletin No. 8.

In Income, all of the revenues for operating physical property, the cost of which is includible in the accounts for investment in road and equipment, have been combined in one account, and correspondingly the expenses of operation have been combined. Separate accounts have been provided for the revenues from and the expenses of operating miscellaneous physical property. A distinct account has been provided in which to include such revenue from operations as has been determined to be uncollectible during the period for which the accounts are stated. Distinct accounts have been provided for rent from and rent for the several classes of equipment.

In Profit and Loss, an account has been provided in which to show the amount of revenue overcharges which are determined to be unrefundable during the period for which the accounts are stated. An account is also

provided for donations from individuals and companies for the construction or acquisition of property or for compensating the carrier for loss anticipated during the early period of operation.

Balance-sheet asset accounts have been provided for improvements on leased railways property; and deposits in lieu of mortgaged property sold. Additional accounts have been provided in which to include demand deposits and time drafts and deposits, items which heretofore have been included as cash. The account Taxes Paid in Advance has been eliminated and provision made for showing in red the net amount of taxes paid over the amount of taxes accrued in an account under the caption of Tax Liability. A liability account has been provided for grants in aid of construction, and separate accounts have been provided for accrued depreciation upon road, upon equipment, and upon miscellaneous physical property.

In the preparation of the text of the accounts and in the grouping of the accounts in the form of a general balance sheet, it has been primarily the purpose to provide for showing, in the group of accounts under the caption Current Assets, only items of available assets or of assets which there is a reasonable assurance will become available within a year from the date of the balance sheet.

The general and special instructions contain a comprehensive statement of the principles underlying the classification, indicating generally the application of the accounting rules. The attention of accounting officers is called to the importance of requiring all employes who are assigned to accounting work in connection with income, profit-and-loss, and general balance-sheet accounts to familiarize themselves thoroughly with these instructions.

In the preparation of the revision of the accounting rules contained in this and other Classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of the Association of American Railway Accounting Officers, and its Standing Committee on Corporate, Fiscal, and General Accounts.

The Classification, in tentative form, has been presented for criticism and suggestions to the chief accounting officer of each railway and to the railway commissions of the several States. All suggestions received from such parties have been given careful consideration, and many of them have been incorporated in the Classification as here issued.

2. Entries Composing Accounts.—Income accounts are those designed to show, as nearly as practicable, for each fiscal period, the total amount of money that a carrier becomes entitled to receive for services rendered, the returns accrued upon investments, the accrued costs paid or payable for the services rendered by it, the losses sustained by it, the amounts

accrued for taxes, for use of moneys, and for use of properties of others, and the appropriations made from income during the period. The net balance of income (or loss) shall be carried to profit and loss.

The carrier's records shall be kept with sufficient particularity to show fully the facts pertaining to all entries made in the accounts provided herein for income, profit and loss, and the general balance sheet. Where the full information is not recorded in the general books, the entries therein shall be supported by other records in which the full details shall be shown. Such general book entries shall contain sufficient reference to the detail records to permit ready identification, and the detail records shall be filed in such manner as to be readily accessible for examination by representatives of the Interstate Commerce Commission.

3. Title and Definition of Account.—When the title and definition of an income, profit-and-loss, or general balance-sheet account clearly indicate that it is a summary of other accounts, it is not required that a special ledger account shall be kept under such a title to include the balances from the accounts usually kept in the ledger, but in such case the titles of the subaccounts in the ledger shall give references by numbers, titles, or both, to the income, profit-and-loss, or general balance-sheet account prescribed herein of which they are subdivisions.

4. Delayed Items.—When no provisions have been made through entries in the accounts of this classification for anticipating delayed items chargeable or creditable to the income account, and the amount of any such item is relatively so large that its inclusion in the accounts for a single year will seriously distort those accounts, the carrier, if so authorized upon application to the Interstate Commerce Commission, shall distribute to profit and loss so much of the amount as may be authorized. The carrier, in its application to the Commission, shall file the full particulars concerning each item and the reasons that in its judgment indicate the propriety of such accounting.

Delayed items are items representing transactions which occurred before the current year.

5. Uncollectible Items.—An account is provided for revenue charges against individuals and companies that during the period for which the income account is stated have been determined to be uncollectible. This account is provided for the purpose of eliminating from the ledger assets of the carrier, or of writing down to nominal amounts in its asset accounts, items of revenue charges that cannot be collected, such as freight charges for which credit has been allowed, or undercharges discovered after the freight has been delivered.

6. Items in Income Accounts.—Income accounts are listed under the two general heads—credits and debits. Under each of these are a number of primary accounts, the names and numbers of which are as follows:

CREDITS

501. Railway operating revenues
502. Revenues from miscellaneous operations
503. Hire of freight cars, credit balance
504. Rent from locomotives
505. Rent from passenger-train cars
506. Rent from floating equipment
507. Rent from work equipment
508. Joint facility rent income
509. Income from lease of road
510. Miscellaneous rent income
511. Miscellaneous non-operating physical property
512. Separately operated properties, profit
513. Dividend income
514. Income from funded securities
515. Income from unfunded securities and accounts
516. Income from sinking and other reserve funds
517. Release of premiums on funded debt
518. Contributions from other companies
519. Miscellaneous income

DEBITS

531. Railway operating expenses
532. Railway tax accruals
533. Uncollectible railway revenues
534. Expenses of miscellaneous operations

535. Taxes on miscellaneous operating property
536. Hire of freight cars, debit balance
537. Rent for locomotives
538. Rent for passenger-train cars
539. Rent for floating equipment
540. Rent for work equipment
541. Joint facility rents
542. Rent for leased roads
543. Miscellaneous rents
544. Miscellaneous tax accruals
545. Separately operated properties, loss
546. Interest on funded debt
547. Interest on unfunded debt
548. Amortization of discount on funded debt
549. Maintenance of investment organization
550. Income transferred to other companies
551. Miscellaneous income charges
552. Income applied to sinking and other reserve funds
553. Dividend appropriations of income
554. Income appropriated for investment in physical property
555. Stock discount extinguished through income
556. Miscellaneous appropriations of income

7. The **income statement** lists the primary accounts under four heads; namely, operating income, non-operating income, deductions from gross income, and disposition of net income. The order in which these primary accounts appear under each head is specified by the Commission; the numbers of such accounts are not in all cases run consecutively. The specified form of an income statement is as follows:

OPERATING INCOME

501. Railway operating revenues*
531. Railway operating expenses*
     Net revenue from railway operations*
532. Railway tax accruals*
533. Uncollectible railway revenues*
     Railway operating income*
502. Revenues from miscellaneous operations
534. Expenses of miscellaneous operations
     Net revenue from miscellaneous operations
535. Taxes on miscellaneous operating property
     Miscellaneous operating income
     Total operating income

*Includes operations of water-lines, if any.

Non-Operating Income

503. Hire of freight cars, credit balance
504. Rent from locomotives
505. Rent from passenger-train cars
506. Rent from floating equipment
507. Rent from work equipment
508. Joint facility rent income
509. Income from lease of road
510. Miscellaneous rent income
511. Miscellaneous non-operating physical property
512. Separately operated properties, profit
513. Dividend income
514. Income from funded securities
515. Income from unfunded securities and accounts
516. Income from sinking and other reserve funds
517. Release of premiums on funded debt
518. Contributions from other companies
519. Miscellaneous income

Total non-operating income
Gross income, or loss

Deductions From Gross Income

536. Hire of freight cars, debit balance
537. Rent for locomotives
538. Rent for passenger-train cars
539. Rent for floating equipment
540. Rent for work equipment
541. Joint facility rents
542. Rent for leased roads
543. Miscellaneous rents
544. Miscellaneous tax accruals
545. Separately operated properties, loss
546. Interest on funded debt
547. Interest on unfunded debt
548. Amortization of discount on funded debt
549. Maintenance of investment organization
550. Income transferred to other companies
551. Miscellaneous income charges

Total deductions from gross income
Net income, or loss

Disposition of Net Income

552. Income applied to sinking and other reserve funds
553. Dividend appropriations of income
554. Income appropriated for investment in physical property

555. Stock discount extinguished through income
556. Miscellaneous appropriations of income
Total appropriations
Income balance transferred to credit, or debit, of profit and loss

8. Items in Profit-and-Loss Accounts.—Profit-and-loss accounts are those designed to show the changes in the corporate surplus or deficit during each fiscal period, as effected by the operations and business transactions during that period, by any disposition of net profits made solely at the option of the accounting company, by accounting adjustments of matters not properly attributable to the period, or by miscellaneous gains or losses not provided for elsewhere; and to show also the unappropriated surplus of the carrier at the date of the balance sheet.

Profit-and-loss accounts are divided under two general heads, credits and debits, under each of which is listed specified primary accounts as shown in the following:

CREDITS

601. Credit balance, at beginning of fiscal period
602. Credit balance transferred from income
603. Profit on road and equipment sold
604. Delayed income credits
605. Unrefundable overcharges
606. Donations
607. Miscellaneous credits

DEBITS

611. Debit balance, at beginning of fiscal period
612. Debit balance transferred from income
613. Surplus applied to sinking and other reserve funds
614. Dividend appropriations of surplus
615. Surplus appropriated for investment in physical property
616. Stock discount extinguished through surplus
617. Debt discount extinguished through surplus
618. Miscellaneous appropriations of surplus
619. Loss on retired road and equipment
620. Delayed income debits
621. Miscellaneous debits

9. Items in Balance-Sheet Accounts.—Balance-sheet accounts are those showing assets, liabilities, and corporate

surplus or deficit of a business. The prescribed list of these accounts is shown in the following:

DEBITS

701. Investment in road and equipment
702. Improvements on leased railway property
703. Sinking funds
704. Deposits in lieu of mortgaged property sold
705. Miscellaneous physical property
706. Investments in affiliated companies
707. Other investments
708. Cash
709. Demand loans and deposits
710. Time drafts and deposits
711. Special deposits
712. Loans and bills receivable
713. Traffic and car-service balances receivable
714. Net balance receivable from agents and conductors
715. Miscellaneous accounts receivable
716. Material and supplies
717. Interest and dividends receivable
718. Rents receivable
719. Other current assets
720. Working fund advances
721. Insurance and other funds
722. Other deferred assets
723. Rents and insurance premiums paid in advance
724. Discount on capital stock
725. Discount on funded debt
726. Property abandoned chargeable to operating expenses
727. Other unadjusted debits
728. Securities issued or assumed, unpledged
729. Securities issued or assumed, pledged

CREDITS

751. Capital stock
752. Stock liability for conversion
753. Premium on capital stock
754. Grants in aid of construction
755. Funded debt unmatured
756. Receiver's certificates
757. Non-negotiable debt to affiliated companies
758. Loans and bills payable
759. Traffic and car-service balances payable
760. Audited accounts and wages payable
761. Miscellaneous accounts payable

762. Interest matured unpaid
763. Dividends matured unpaid
764. Funded debt matured unpaid
765. Unmatured dividends declared
766. Unmatured interest accrued
767. Unmatured rents accrued
768. Other current liabilities
769. Liability for provident funds
770. Other deferred liabilities
771. Tax liability
772. Premium on funded debt
773. Insurance and casualty reserves
774. Operating reserves
775. Accrued depreciation, road
776. Accrued depreciation, equipment
777. Accrued depreciation, miscellaneous physical property
778. Other unadjusted credits
779. Additions to property through income and surplus
780. Funded debt retired through income and surplus
781. Sinking fund reserves
782. Miscellaneous fund reserves
783. Appropriated surplus not specifically invested
784. Profit and loss, balance

10. The manner in which a **general balance-sheet statement** shall be prepared is prescribed by the Commission and is as follows:

ASSET SIDE

INVESTMENTS

701. Investment in road and equipment
702. Improvements on leased railway property
703. Sinking funds
    Total book assets at date, in short column
    Carrier's own issues at date, in short column
    Other assets at date, in long column
704. Deposits in lieu of mortgaged property sold
    Total book assets at date, in short column
    Carrier's own issue at date, in short column
    Other assets at date, in long column
705. Miscellaneous physical property
706. Investments in affiliated companies
    Stocks
    Bonds
    Notes
    Advances

707. Other investments
   Stocks
   Bonds
   Notes
   Advances
   Miscellaneous
   Total

CURRENT ASSETS

708. Cash
709. Demand loans and deposits
710. Time drafts and deposits
711. Special deposits
   Total book assets at date, in short column
   Carrier's own issues at date, in short column
   Other assets at date, in long column
712. Loans and bills receivable
713. Traffic and car-service balances receivable
714. Net balance receivable from agents and conductors
715. Miscellaneous accounts receivable
716. Material and supplies
717. Interest and dividends receivable
718. Rents receivable
719. Other current assets
   Total

DEFERRED ASSETS

720. Working fund advances
721. Insurance and other funds
   Total book assets at date, in short column
   Carrier's own issues at date, in short column
   Other assets at date, in long column
722. Other deferred assets
   Total

UNADJUSTED DEBITS

723. Rents and insurance premiums paid in advance
724. Discount on capital stock
725. Discount on funded debt
726. Property abandoned chargeable to operating expenses
727. Other unadjusted debits
728. Securities issued or assumed, unpledged, in short column only
729. Securities issued or assumed, pledged, in short column only
   Total

LIABILITY SIDE

STOCK

751. Capital stock
   Book liability at date, in short column

Held by or for carrier at date, in short column
Actually outstanding at date, in long column
752. Stock liability for conversion
753. Premium on capital stock
Total

GOVERNMENTAL GRANTS

754. Grants in aid of construction

LONG TERM GRANT

755. Funded debt unmatured
Book liability at date, in short column
Held by or for carrier at date, in short column
Actually outstanding at date, in long column
756. Receiver's certificates
757. Non-negotiable debt to affiliated companies
Notes
Open accounts
Total

CURRENT LIABILITIES

758. Loans and bills payable
759. Traffic and car-service balances payable
760. Audited accounts and wages payable
761. Miscellaneous accounts payable
762. Interest matured unpaid
763. Dividends matured unpaid
764. Funded debt matured unpaid
765. Unmatured dividends declared
766. Unmatured interest accrued
767. Unmatured rents accrued
768. Other current liabilities
Total

DEFERRED LIABILITIES

769. Liability for provident funds
770. Other deferred liabilities
Total

UNADJUSTED CREDITS

771. Tax liability
772. Premium on funded debt
773. Insurance and casualty reserves
774. Operating reserves
775. Accrued depreciation, road
776. Accrued depreciation, equipment
777. Accrued depreciation, miscellaneous physical property
778. Other unadjusted credits
Total

CORPORATE SURPLUS

779. Additions to property through income and surplus
780. Funded debt retired through income and surplus
781. Sinking fund reserves
782. Miscellaneous fund reserves
783. Appropriated surplus not specifically invested
Total appropriated surplus
784. Profit and loss, balance
Total corporate surplus

11. Special Instructions.—The method of handling discount and premium on capital stock is prescribed by the Commission in special instructions as follows:

DISCOUNT AND PREMIUM ON CAPITAL STOCK.—Ledger accounts shall be provided to cover the discounts and premiums at the sale or resale of each subclass of capital stock issued or assumed by the company. The total of the net debit balances remaining in these several accounts shall be included in Account No. 724, Discount on Capital Stock, and the total of the net credit balances in Account No. 753, Premium on Capital Stock. For explanation of *subclass* see Account No. 751, Capital Stock.

By the term *discount* is meant the excess of the par value of stocks actually issued or assumed over the actual money value of the consideration received for such stocks. By the term *premium* is meant the excess of the actual money value of the consideration received for stock actually issued or assumed over the par value of such stock.

The term *premium* is not intended to include amounts received representing expected dividends considered to have accrued since the last dividend period in case of stocks on which dividends are regularly paid, nor is discount, as above defined, intended to be diminished by any such amount representing expected dividends explicitly stated in the price at which the stock is issued.

Entries in these accounts representing discounts shall be carried therein until offset (1) by premiums realized on subsequent sales of the same subclass of stock, (2) by assessments levied on the stockholders, (3) by appropriations of income or surplus for that purpose, or (4) by charges to profit and loss upon reacquirement of the stock. Entries in these accounts representing premiums realized shall be carried therein until offset (1) by discounts suffered on sales of the same subclass of stock, or (2) by credits to profit and loss upon reacquirement of the stock.

In case the accounting company is permitted and elects to distribute all or any part of the net premium on its capital stock to its stockholders, the amount thus distributed shall be charged to the premium account.

For the purpose of this Classification, the premium realized at the sale of capital stock shall not be considered a profit-and-loss item, except upon the reacquirement of the stock sold.

In no case shall discount on capital stock be charged to or included in any account as a part of the cost of acquiring any property, tangible or intangible, or as a part of the cost of operation.

When stock which has been issued or assumed by the accounting company is reacquired, the difference between the price paid and the par value of the stock shall be credited to Profit-and-Loss Account No. 607, Miscellaneous Credits, or charged to Account No. 621, Miscellaneous Debits, as may be appropriate. Concurrently the premium or discount account for the particular issue of stock reacquired shall be adjusted through profit and loss to the extent of the premium or discount applicable to the shares reacquired. In case the premium realized or discount suffered at the prior sale of the stock reacquired has been included in an asset account other than the premiums and discounts account, such asset account shall be concurrently adjusted through profit and loss to the extent of the premium or discount previously included therein with respect to the shares reacquired.

STUDY OF CLASSIFICATION

12. Accompanying this Instruction Paper is sent a copy of the Classification of Income, Profit-and-Loss, and General Balance-Sheet Accounts of Steam Roads, as issued by the Interstate Commerce Commission. This pamphlet should be studied as a part of this Instruction Paper not only because the following Examination Questions are based on it, but also because a knowledge of its contents will prove especially valuable in understanding the financial statements issued by railroads.

ACCOUNTS FOR MINING COMPANIES

ACCOUNTING METHODS

INTRODUCTION

1. The prominence given to the mining industry by the different nations of the world is shown by the establishment of special government departments for its control. Yet the requirements for the organization of mining corporations are neither special nor unusual.

A mining company is organized in the same manner as a manufacturing or trading corporation, and usually under the same general laws, although there are practices in connection with their organization that do not, as a rule, obtain in the establishment of manufacturing companies.

The operations of digging, hoisting, and preparing coal or ore for shipment is analogous to the manufacturing of articles for sale to the trade. Once produced and ready for shipment, the sale and delivery resolves itself into a matter of salesmanship, as in any trading concern.

2. A mining company either owns the mines or leases them for a term of years on a royalty basis of so much per ton of coal mined. The company that operates its own mines may open an account for each mine, to which is charged all outlay for development, necessary construction, improvements, operating charges, expenses, etc. Income from sales, less all operating and general charges shows the net earnings of the mine for any

fiscal period. In case the mine is leased to another company, the bookkeeping is reduced to the entry of royalties received and of depreciations and other expenses incurred.

3. As the head office is usually located in some city, the superintendent, or his clerks, must carefully record full details pertaining to operations, coal mined, broken, stocked, and shipped, labor charges, pay roll, accidents, etc., and then send these to the head office in the form of detailed reports. From these reports, entries are made in the proper accounts.

The miner is paid either by the ton or by the carload of coal mined. From the amount thus due him, however, deductions are made for helpers, if any, supplies furnished, as powder and tools, rent of house, store charges, and probably for benefit or relief fund. The balance due is paid by the manager in cash or by check sent from the head office. Care must therefore be exercised in keeping track of supplies, stores, etc. charged to each miner's account and to report these charges to the head office. The sales are usually made from the head office, though shipments are sent direct from the mine according to directions supplied.

BOOKS AND ACCOUNTS

4. In the conduct of a mining company there are numerous forms and records in use; many of these, however, are statistical and have little or no bearing upon the account-keeping system. A great many of these records are required by national and state laws and regulations, and numerous reports pertaining to labor, men employed, accidents, deaths, sickness, output of ore, etc. are made to the state in which the mines are located, also to the Department of Mines in Washington.

5. The income from a mine must be derived almost entirely from its output of coal or ore, and to some extent from its by-products; but the cost of operating the mine must be separated into several divisions. There is the expense at the head office, the original cost of the mine, the cost of outside equipment, the cost of development and opening the mine, the inside

construction, the mine equipment, cost of mining the ore, cost of bringing it to the surface, cost of milling or breaking, the selling expense, the cost of transportation, etc.

If all the accounts are kept at the mine, only the main accounts need be kept at the head office, with suitable controlling accounts for the various mine properties and mine activities. Data for entry therein will be obtained from the reports received from the mine superintendent at regular periods. If the books are kept at the head office, then only such records need be kept at the mines as are necessary for providing detailed information for daily reports.

In any case there is required a general ledger, customers' ledger, creditors' ledger, or voucher record, cash book, sales book, journal, labor records, record of sales from company stores, record of mine and milling expenses, etc. Of course, there is considerable variance in the books and accounts kept by mining companies and in the manner of recording data, consequently no one system can be outlined that will meet the needs of all.

6. Accounts of a Coal-Mining Company.—Following is shown a partial schedule of accounts used by a large company engaged in the mining and selling of soft coal and in the manufacture of coke. First, there are given the forty-one general ledger accounts; this list shows the large variety of the items that must be accounted for. The present list is divided into two parts. The first part (*a*) shows the operating expense accounts at the mine and their subdivisions. The second part (*b*) shows the operating expense accounts at the coke plant and their subdivisions.

GENERAL LEDGER ACCOUNTS

1. Cost of property
2. Lands
3. Mine development
4. Tramways, chutes, and trestles
5. Buildings
6. Power and machinery
7. Cars and tracks
8. Coke ovens
9. Boarding-house fixtures
10. Saloon buildings
11. Machinery for prospecting
12. Earnings
13. Mine expense (controlling account)
14. Coke expense (controlling account)

15. General expense (frequently subdivided)
16. Boarding-house expenses
17. Boarding-house receipts
18. Rents
19. Insurance
20. Taxes
21. Personal-injury claims
22. Coal prospecting
23. Depreciation of general plant, etc.
24. Interest, discount, and exchange
25. Vouchers
26. Pay rolls
27. Treasurer (or cash account)
28. Unclaimed wages
29. Depreciation reserve account
30. Material and supplies
31. Engineering property
32. Pay-roll deficiency
33. Personal injury fund
34. Animals killed and sold
35. Special renewal fund
36. Individuals and companies (accounts receivable)
37. Water supply
38. Smithing
39. Sawmill
40. Depreciation of animals
41. Profit and loss

MINE-OPERATING ACCOUNTS

1. Expense of mining
   - Hand mining
   - Contract machine mining
   - Day-work machine mining
   - Drilling, shooting, and loading
   - Loading company coal
   - Ladders and tool boxes
   - Running man trip
   - Sharpening tools
   - Powder man
   - Check man
   - Wire man
   - Shot inspectors
   - Earth tamping
   - Tamping and powder boxes
   - Interpreter
2. Hauling
   - Proportion power-house expense
   - Drivers
   - Outside hoistmen
   - Underground hoistmen
   - Locomotive men
   - Rope runners
   - Couplers and spraggers
   - Roller men and greasers
   - Proportion stable expense
   - Harness repairs and shoeing
   - Clearing up wrecks
   - Repairs haulage signals
   - Cleaning haulage tracks
   - Roller repairs and renewals
   - Repairing haulage entries
3. Loading
   - Outside foreman's salary
   - Weighman and topmen
   - Pushers and dumpers
   - Couplers and spraggers
   - Proportion power-house expense
   - Running chute engine
   - Loading by day labor
   - Loading by contract
   - Running and repairing box loader
   - Car handlers
   - Attendance elevators, screens, etc.
   - Cost dummy doors
   - Unloading dust and yard waste
   - Cleaning yard tracks
   - Damage to railroad cars and tracks

4. Repairs to cars
   - Repairing wrecked cars
   - Repairing worn-out cars
   - Replacing lost cars
5. Repairs to tracks
   - Hoist and locomotive tracks
   - Ordinary entry and room tracks
   - Taking up old rails and ties
6. Electric light
   - Proportion power-house expense
   - Repairs interior wiring
7. Entry driving
   - Yardage in straight coal
   - Yardage in coal and rock
   - Yardage in straight rock
   - Allowance for boney coal or rock
   - Allowance for rolls
   - Allowance for water
8. Rooms and rolls
   - Rooms turned
   - Allowance for rolls in rooms
   - Allowance for brushing roof
   - Allowance for boney coal or rock
   - Allowance for water
9. Ventilation
   - Proportion power-house expense
   - Gas and air inspectors
   - Fan expenses and engineer
   - Building and repairing stoppings
   - Brattice cloth and bratticing
   - Building and repairing mine doors
   - Trappers
   - Cleaning air ways
   - Repairing air ways
10. Drainage and watering mine
    - Proportion power-house expense
    - Outside pumps and pumpmen
    - Inside pumps and pumpmen
    - Water men and supplies
    - Ditches and sumps
11. Timber and props
    - Driving entries and rooms
    - Retimbering and robbing rooms
    - Repairing haulage entries
    - Repairing air and traveling ways
    - Unloading and piling
    - Hauling and sawing
    - Loading and delivering
    - Drawing props
12. Dead work
    - Retimbering rooms
    - Regrading and brushing entries
    - Prospecting faults
    - Loading and hauling rock
    - Dumping and stowing rock
    - Underground inspection
    - Repairing company tools
    - Cleaning camp
13. Repairs to buildings and chutes
    - Main chute and trestle
    - Crusher elevator and screen building
    - Power and boiler house
    - Boarding houses
    - Barn and corral buildings
    - Boarding houses
    - Blacksmith and machine shops
    - Other mine buildings
    - Railroad track and mine scales
    - Hospital
14. Repairs machinery
    - Boilers and connections
    - Steam lines
    - Stationary steam engines
    - Steam hoisting engines
    - Electric hoisting engines
    - Air compressors
    - Electric generators

Electric locomotives
Miscellaneous electric motors
Outside pumps
Underground pumps
Outside water-lines
Underground water-lines
Outside air lines
Underground air lines
Outside electric power lines
Underground electric power lines
Fans and fan engines
Proportion crushers, elevators, etc.
Tipples and screens
Renewal wire ropes
Mining machines
Machinery inspection
Telephone lines
Wagons
Proportion salary general master mechanic

15. Superintendent and clerks
    Proportion general and mine superintendent's salaries
    Mine foreman
    Mine clerks
16. Engineering
    Mine surveyors and assistants
    Office supplies
    Outside expenses
17. General expenses
    Janitor service
    Sundry supplies
    Office fixtures
    Firing office heater
18. Incidentals
    Miscellaneous teaming
    Pay-day expenses
    Free coal
    Watchman
    Guard and special service expenses
    Rescue apparatus

Coke Expense Accounts

40. Coal used
    Tons @________
41. Superintendents and clerks
    Proportion general and coke superintendent's salary and expenses
    Coke-oven foremen
    Proportion office clerks
    Proportion office supplies
    Timekeeper
42. Engineering
    Mine surveyors and assistants
    Office supplies
    Outside expenses
43. Charging ovens
    Proportion power-house expense
    Handling coal at bins
    Cleaning at bins and scales
    Weighing charges
    Running larry cars
    Repairing larry cars and tracks
    Repairing motor and power lines
    Repairing scales
    Levelers
44. Burning and drawing
    Coke pullers
    Plastering oven doors
    Proportion power-house expense
    Proportion pumping expense
    Repairs oven water-line
    Repairs, tools
    Charging hole covers
45. Loading coke
    Loading railroad cars by contract
    Loading railroad cars by day labor

Car handlers
Cleaning railroad tracks
Damage to railroad cars and tracks
Expense and repair tools
Railroad weighman
Cost dummy doors
Repairs railroad-track scales

46. Loading cinders
Loading and unloading railroad cars
Hauling away in wagons
Cleaning docks
Expense and repair tools
Proportion stable expense
Depreciation of animals

47. Firing cold ovens
Wood used
Coal used
Charging, burning, and drawing
Disposing of cinders

48. Repairs to coke ovens
Brick and fireclay
Stone, lime, etc.
Cast-iron door frames
Repacking ovens
Repairs dock walls

49. Repairs to buildings
Slack bins
Store and tool house
Scale house
Trestles and bridges
Superintendent's office

50. Coke experiments
Preparing and coking coal
Transportation on samples
Cost of analysis
Laboratory equipment

51. Incidentals
Pay-day expenses
Watchman
Janitor service
Free coal
Telephone service and repairs

7. Monthly Statements.—From information contained in the general ledger, supplied by monthly reports from the mines and through adjustments of inventories, accrued items,

INCOME ACCOUNT

BLANK COAL COMPANY

EXHIBIT____________________191__

For month of________191__		
Gross earnings from sale of coal and coke	$______	
Operating expenses	______	
Net earnings from operating of mines		$______
Add		
Receipts from miners' houses, etc.	$______	
Interest, discount, and exchange	______	
Supply-store company, dividend No.	______	______
Total income		$______
Charges to income		
Taxes	$______	
Insurance	______	
Interest on bonds	______	
Sinking-fund instalment	______	
Depreciation of general plants	______	
Personal-injury claims	______	$______
Net income month of________191__		$______

etc., regular monthly statements are made of income and expenses. These statements are in two parts. One part shows the income and expenses for the current month; the other part shows the results for all the months of the fiscal year up to the end of the month shown in the first part.

INCOME ACCOUNT

BLANK COAL COMPANY

Jan. 1, 191 to________191		
Gross earnings from sale of coal and coke	$_____	
Operating expenses	_____	
Net earnings from operating of mines		$_____
Add		
Receipts from miners' houses, etc.	$_____	
Interest, discount, and exchange	_____	
Dividend No. on Company stock	_____	
Supply-store company dividends Nos. and	_____	
Subsidiary coal company dividend No.	_____	_____
Total income		$_____
Charges to income		
Taxes	$_____	
Insurance	_____	
Interest on bonds	_____	
Sinking-fund instalment	_____	
Depreciation of general plants	_____	
Personal-injury claims	_____	
Net income from Jan. 1 to		$_____

8. Balance Sheets.—Additional accounts are shown in the balance sheets, one form of which is here shown.

BALANCE SHEET

BLANK COAL COMPANY AND SUBSIDIARIES

STATEMENT OF ASSETS AND LIABILITIES AS OF________191

Current assets		
Material and supplies, etc.	$	$
Saw-mill account, Mine No. 1		
Saw-mill account, Mine No. 2		
Storage coke, Mine No. 2		
Storage slack, Mine No. 1		
Fire insurance (proportions not charged out)		
Taxes, New Jersey (proportion not charged out)		
United States excise tax on corporations (proportions not charged out)		
Cash in treasury, New York City		
Cash in treasury, Home Office		
Cash in hands of Trust Company of		
Trustee, to pay coupons of Coal Company		
Trustee to pay coupons of (subsidiary) Coal Company		
Due from individuals and company's coal sales		

Due from individuals and company's bills collectible $
Blank Coal Company first mortgage 5-per-cent. bonds in treasury and owned as under:
Blank Coal Company
Subsidiary Coal Company
Current liabilities
Vouchers
Pay rolls
Unclaimed wages
Blank medical department fund
Blank Company coupons due and unpaid including 191 coupons
Blank Coal Company coupons accrued due 191
Subsidiary Coal Company coupons due and unpaid including 191 coupons
Subsidiary Coal Company coupons accrued due 191
Accrued sinking fund, Blank Coal Company
Accrued sinking fund, Subsidiary Coal Company
Accrued taxes
Net proceeds from mines, Blank payable November Est.
Property and improvements, Blank payable November Est.
Property and improvements, payable Est.
United States excise tax on corporation, payable Est.
Taxes, New Jersey, payable
Property accounts
Less charged to
Sinking fund
Depreciation of property
Securities deposited with Blank Trust Company of Trustee
Subsidiary Coal Company capital stock, shares par value
Supply Store Company capital stock, shares par value
Another Coal Company capital stock, shares par value
Subsidiary Coal Company's mortgage, etc.
Additions to plants, improvements, etc.
Blank Coal Company
Subsidiary Coal Company
Securities owned, in treasury
Capital stock and first-mortgage 6-per-cent. bonds of The Coal and Coke Company
(shares of capital stock par value $100 each)
(first-mortgage 6-per-cent. bonds denomination $1,000 each)
Capital stock of the Coal Company shares par value
Preferred capital stock Company shares par value

Other assets	
Trust Company of New York, Trustee for	$
Sinking-fund 5-per-cent. bonds, Blank Coal Company	
Sinking-fund 5-per-cent. bonds, Subsidiary Coal Company	
Trust Company of New York, Trustee	
Insurance account, Blank Coal Company	
Insurance account, Subsidiary Coal Company	
Engineering property	
Boarding- and bunk-house fixtures	
Improvements, home yards	
Less depreciation	
Improvements, Western coal yard	
Capital stock	
First-mortgage 5-per-cent. bonds	
Blank Coal Company, less canceled by sinking fund	
Subsidiary Coal Company, less canceled by sinking fund	
Deferred accounts	
Sinking fund, Blank Coal Company	
Sinking fund, Subsidiary Coal Company	
Personal-injury and other funds	
Depreciation account, general plants	
Property destroyed by fire	
Profit and loss, balance to credit	

Date, 191 Correct,

Auditor

9. Illustrative Example.—In order to illustrate the method of preparing statements for a mining company, the following question from the New York C. P. A. Examination is given. It is a brief question but it will illustrate how the statements should be prepared, and that they are no different from the statements of other corporations:

Prepare income and profit-and-loss accounts and balance sheet, showing gross earnings and net earnings, also the average cost per ton. The trial balance of the XYZ Coal Mining Company, as of December 31, is as follows:

The total output for the year was 132,300 tons. An examination of the books and accounts shows that the following charges had not been entered: Horses and mules, $2,200; car and mine-rail account, $1,450; claims for injuries, $1,000. During the year, the bookkeeper, through error, charged to inside construction $3,415, instead of to inside pay roll. The coal is mined on a lease that averages 20 cents per ton. The inventory is as follows: Timber and props, $1,500; powder, $555; oil,

etc., $175. In preparing this statement, allowance for depreciation on breaker and machinery, blacksmith shop and construction, cars and rails, may be considered at the rate of 5 per cent.

10. The question under review presents the feature of operating a mine on a per ton royalty basis. The accounts will

Cash	$ 5,674.50	
Breaker and machinery	145,000.00	
Office building	5,000.00	
Blacksmith shop	4,000.00	
Inside construction	15,675.00	
Car and mine-rail account	7,534.50	
Horses and mules	5,600.00	
Accounts receivable	35,112.25	
Bills receivable	10,000.00	
Capital stock, common		$ 50,000.00
Capital stock, preferred		100,000.00
Coal sales		257,890.00
Accounts payable		12,500.00
Surplus		17,709.35
Depreciation on buildings and machinery		12,000.00
Supplies	8,240.00	
Pay roll, outside	24,701.50	
Pay roll, inside	110,434.25	
Salaries, superintendents, etc.	6,000.00	
Salaries, office clerks	4,500.00	
Office expenses	1,147.35	
General expense	750.00	
Claims for injuries	4,000.00	
Insurance (expires July 1 next)	5,500.00	
Repairs to buildings	4,075.00	
Repairs to construction	3,445.00	
Barn expense	1,500.00	
Selling expense	4,500.00	
Royalty account	30,500.00	
Water	800.00	
Fuel	935.00	
Timber and props	5,475.00	
	$450,099.35	$450,099.35

differ slightly from those of a company owning the mine but in other respects records of operations are kept in a similar manner. The royalty payments are considered part of the cost of

operation in much the same respect that the depreciation is part of the operating cost for a company owning the mine; in consequence, the mooted question of mine depreciation need not be discussed, though the various properties belonging to the operating company must be considered as having depreciated.

Mines are usually leased for a definite number of years, therefore all costs of construction and buildings should be written off over the life of the lease. Since 5-per-cent. depreciation is mentioned in the question, it has, for working purposes, been assumed that the lease had a currency of 20 years.

11. Insurance account is assumed to have been for 1 year and that one-half of it is unexpired. This is purely an assumption, and it might be even better to consider one-third unused. Royalties to the extent of $4,040 have been prepaid, as will be seen by a comparison of the royalty account with the tons of output. Interesting statistical features are shown in the cost summary on the basis of 1 ton of coal. It must be presumed that the entire output of coal mined has been disposed of, since no mention of coal in stock has been made. Claims for injuries might have been considered as an operating charge, although it will not be so considered here; insurance, too, might have been so considered, at least in part. The adjusting entries called for should be made before the statements are completed; they are:

Pay roll, inside	$3,415	
To construction		$3,415
Car and mine-rail account	1,450	
To accounts payable		1,450
Horses and mules	2,200	
To accounts payable		2,200
Claims for injuries	1,000	
To accounts payable		1,000

12. The forms of statements used are not given as model forms for mining corporations but simply as one of many forms that might be shown. Some of the items in the three divisions might be differently arranged, but this would not affect the genuineness of the solution. In the income-and-operating statement here shown the gross earnings are given as a final item.

INCOME AND OPERATING ACCOUNT

XYZ Coal Mining Company for Year Ended December 31, 191

Income			
Sales of coal			$257,890.00
Operating Expenses			
Inside costs			
Supplies	$ 8,240		
Less inventory	730	$ 7,510.00	
Pay roll, inside		113,849.25	
Salaries, say 60 per cent. of $6,000		3,600.00	
Repairs of construction		3,445.00	
Barn expenses		1,500.00	
Royalties paid	$30,500		
Less prepayment	4,040	26,460.00	
Water		800.00	
Fuel		935.00	
Timber and props	$ 5,475		
Less inventory	1,500	3,975.00	
Depreciation of construction, cars, rails, 5 per cent.		1,062.23	
Total inside costs		$163,136.48	
Outside costs			
Pay roll, outside		$ 24,701.50	
Salaries, say 40 per cent. of $6,000		2,400.00	
Repairs to buildings		4,075.00	
Depreciation of breaker and machinery and blacksmith shop, 5 per cent.		7,450.00	
Total outside expenses		$ 38,626.50	
Total operating costs		$201,762.98	
Add selling expenses		4,500.00	
Cost of coal sales			206,262.98
Gross earnings of mine			$ 51,627.02

The accompanying profit-and-loss account brings out as the final item the net earnings and gives in the form of a summary important cost items per ton of coal handled.

PROFIT-AND-LOSS ACCOUNT

XYZ Coal Mining Company, New York
For Year Ended December 31, 191

Credits		
Gross earnings from operating account		$51,627.02
Debits		
Clerks' salaries	$4,500.00	
Office expenses	1,147.35	
General expenses	750.00	
Claims for injuries	5,000.00	
Insurance used	2,750.00	
Depreciation office building, 5 per cent.	250.00	
Total general expenses		14,397.35
Net earnings of company		$37,229.67

Cost-Summary
(Per Ton of Coal)

Coal output for year 132,300 tons		
Inside operating costs	$163,136.48 =	$1.233
Outside operating costs	38,626.50 =	.292
Total operatings costs	$201,762.98 =	1.525
Selling costs	4,500.00 =	.034
General charges	14,397.35 =	.108
Aggregate cost	$220,660.33 =	1.667
Net earnings, 28 cents per ton		

BALANCE SHEET
XYZ Coal Company
For Year Ended December 31, 191

Assets

Current assets			
Cash on hand		$ 5,674.50	
Bills receivable		10,000.00	
Accounts receivable		35,112.25	$ 50,786.75
Prepaid charges			
Insurance unexpired		2,750.00	
Royalties prepaid		4,040.00	6,790.00
Inventories			
Powder on hand		555.00	
Oil on hand		175.00	730.00
Properties and equipment			
Inside construction		12,260.00	
Car and mine-rail account		8,984.50	
Horses and mules		7,800.00	
Timber and props		1,500.00	
Blacksmith shop		4,000.00	
Breaker and machinery		145,000.00	
Office building		5,000.00	184,544.50
Total assets			$242,851.25

Liabilities and Capital

Current liabilities			
Accounts payable		$ 17,150.00	
Reserve for depreciation		20,762.23	$ 37,912.23
Capital and surplus			
Surplus, December 31, last	$17,709.35		
Net earnings for year	37,229.67	54,939.02	
Capital stock, common		50,000.00	
Capital stock, preferred		100,000.00	
Net worth of company			204,939.02
			$242,851.25

Audit Certificate

Having audited the books and accounts of the XYZ Coal Company for the fiscal year ended December 31, 1912, we hereby certify that the accompanying Balance Sheet and Profit-and-Loss Account are in accordance therewith and in our judgment present a correct statement of the company's financial condition and the operations for the fiscal year.

R. J. Bennett & Company,
Certified Public Accountants

Philadelphia, Jan. 20, 1913.

The accompanying balance sheet also shows the certificate of the auditor.

13. Depreciation of Mines.—Mines become depleted more through the exhaustion of the mineral than through any other process of depreciation. It is therefore a wasting asset that must necessarily decrease in value in proportion to the amount of mineral extracted. The same application can be made to oil or gas wells, quarries, etc. If the engineer's estimate of the number of tons of mineral in a mine are correct, then the value of the unmined mineral would be the original value placed on it less the mineral already taken out. On account of the uncertainty as to the amount of mineral in a mine and the added expense involved in mining, it is difficult to decide on a rate of depreciation that will accurately represent the average depletion during the life of the mine or of the terms of the lease, as the case may be. The entire matter must be based on estimates, which manifestly may be incorrect and misleading. In the case of a leased mine, the proportion that the total cost of the output at any time bears to the estimated output during the tenure of the lease, should be taken.

While in most states mining companies are not compelled to write off any depreciation before declaring a dividend, it is considered prudent to write off annually such proportion of the total cost less residual value as the output of the mine bears to the estimated contents of the mine. A reserve is usually set up, called Reserve for Exhaustion of Mine, or Reserve for Depreciation, as the case may be. Some companies set aside such amounts from year to year as will be necessary to accumulate in cash during the estimated life of the mine the amounts invested therein; this might be styled a Reserve for Repayment of Capital Investment. The question naturally arises, however, whether it would not be better for the stockholders to take ample dividends from year to year rather than permit the money to remain in unuse in the hands of the company. While creating the reserve, the stockholders get their investment back at the time of depletion; but in case the amounts are paid out

in dividends, such dividends will contain a gradual return of the investment. As dividends are usually considered as income only, and not as part income and part return of capital, investors should be fully informed as to the plan being followed in handling dividend payments. While it may seem good policy to use all the earnings in the payment of dividends, it is nevertheless wise and prudent to reserve a reasonable amount to meet any future contingencies that might arise.

ACTUAL REPORT OF A MINING COMPANY

14. In order to illustrate, briefly, the style and manner of preparing an annual report and statement, the following pages from the Annual Report of the Tonopah Belmont Development Company are used, by permission:

ELEVENTH ANNUAL REPORT

TONOPAH BELMONT DEVELOPMENT COMPANY

PHILADELPHIA, April 15, 1914

TO THE STOCKHOLDERS OF THE TONOPAH BELMONT DEVELOPMENT COMPANY:

The details and results of operations on your properties for the fiscal year ended February 28, 1914, are set forth in the financial and statistical statements herein submitted, as follows:

1. Income account
2. Combined balance sheet, February 28, 1914
3. Comparative balance sheet
4. Operating expenses of mine
5. Operating expenses of new Belmont mill
6. Total development work

The combined net earnings of your properties during the fiscal year were $2,015,588.48, as compared with $1,773,226.70 for the previous year.

The average value of the ore produced during the year, as compared with the previous 4 years, is as follows:

	1914	1913	1912	1911	1910
Tons shipped to mill	172,646	128,975	87,952	59,159	29,898
Average gross value per ton	$21.07	$24.21	$20.84	$27.58	$14.40
Tons shipped to smelters		562	27,611	21,907	7,032
Average gross value per ton		$70.71	$61.35	$54.76	$34.89
Total production (dry tons)	172,646	129,537	115,563	81,066	36,930
Average gross value per ton	$21.07	$24.34	$30.51	$34.93	$17.99

The sales of ore, bullion, concentrates, etc., for the year, as compared with the previous years, were divided as follows:

	1914	1913	1912
Gold			
Number of ounces	56,067	38,371	45,069
Sold for	$1,158,980.08	$ 793,191.59	$ 886,971.47
Average per ounce	$20.671	$20.672	$19.680
Silver			
Number of ounces	5,142,083	3,826,399	4,535,762
Sold for	$3,040,135.47	$2,367,559.59	$2,381,542.54
Average per ounce	$.591	$.618	$.525
Total	$4,199,133.55	$3,160,751.18	$3,268,514.01
Less treatment charges, assaying, freight and express	118,117.25	100,537.52	387,337.26
Total receipts	$4,081,016.30	$3,060,213.66	$2,881,176.75

The operating expenses of the mine for the fiscal year, compared with the previous 3 years, are as follows:

	1914	1913	1912	1911
Mining expenses	$468,213.78	$399,208.47	$377,585.25	$322,766.41
Depreciation of mining equipment	15,028.44	15,028.44	15,028.44	15,028.44
Development work	257,709.21	150,485.06	167,832.37	160,369.60
Totals	$740,951.43	$564,721.97	$560,446.06	$498,164.45
Dry tons of ore mined	172,646	129,537	115,563	81,066
Cost per ton, including depreciation and development	$4.35	$4.35	$4.85	$6.14½

The operating expenses of the new mill, including indirect expenses and depreciation, as compared with the period during which it was operated in the previous year, are as follows:

	1914	(7 Mo.) 1913
Operating expenses	$525,620.16	$292,372.29
Tons treated	172,398	84,886
Direct cost per ton	$2.560	$2.909
Indirect cost per ton	.489	.535
Total cost per ton	$3.049	$3.444
Average extraction, per cent	94.45	94.43
Average number of stamps dropped	54.8	51.9

The new mill has already saved in increased extraction and lessened costs, approximately $25,000 more than its total cost.

The net realization from the operation of the old mill as a custom mill during the fiscal year was $38,546.78, as compared with $9,802.19 for the 6 months' period of the previous year. While the net results of operation of the old mill are relatively unimportant, it is considered good policy to continue its operation, without profit if necessary, in order to insure its upkeep and readiness to treat Belmont ores exclusively in cases of emergency.

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TOTAL OPERATING COST
MINE AND TONOPAH MILL
FOR FISCAL YEAR ENDED FEBRUARY 28, 1914

	Dry Tons	Values		1912 Average Per Ton	1912 Average Per Ton
Mine					
Gross value ore milled	172,398	$3,636,861.43		$21.098	$24.34
Net value ore stock on hand added to ore stock	248	2,038.04		8.217	
Total mine production	172,646		$3,638,899.47	21.078	
Metal losses in mill tailings	172,398	$ 203,265.70		1.179	1.47
Smelting losses in concentrates	172,398	18,657.34		.108	.18
Smelting losses ore shipped					4.12
Total losses in treatment	172,398	$ 221,923.04	221,923.04	1.287	1.64
Values realized	172,646		$3,416,976.43	19.791	22.70
Mining					
Stoping	150,161	452,664.42		3.014	3.25
Development	22,485	257,709.21		11.461	13.29
	172,646	$ 710,373.63		4.114	4.12
Transportation					.24
Milling					
Milling	172,398	$ 441,354.02		2.557	2.96
Marketing bullion	172,398	55,555.12	$ .322		
Marketing concentrates and slag	172,398	18,352.84	.106	.428	.49
General expense					
Administration, taxes, office expense, depreciation	172,646	185,249.80		1.073	1.11
Total operating	172,646		1,410,885.41	8.172	8.96
Realization from operation	172,646		$2,006,091.02	11.619	13.74
Miscellaneous profit			8,225.07		
Total profit			$2,014,316.09		

The examination of other mining properties, with a view to purchase, has been continued throughout the year. Preliminary examinations were made of fifty-seven properties of the one hundred and forty submitted, but in nearly all cases the prices and terms were prohibitive. Several were carefully considered after final examination, and negotiations are being conducted for one which seems to meet all requirements.

There has been no change in the extent of your property since the last annual report.

Extracts from the annual report of the General Superintendent, and a map showing the surface boundaries of your property with reference to contiguous properties, are appended.

Your management again wishes to express its appreciation of the efficient services of the organization at Tonopah and Millers.

By order of the Board of Directors.

CLYDE A. HELLER,
President

COMBINED BALANCE SHEET

TONOPAH BELMONT DEVELOPMENT COMPANY AND BELMONT MILLING COMPANY

FEBRUARY 28, 1914

(MINE AND MILL REGARDED AS ONE)

ASSETS

Property			
Mines and mining claims		$2,010,959.16	
Shafts, buildings, and machinery at mine		251,034.94	
Millers mill		75,121.35	
Tonopah mill		361,138.72	
			$2,698,254.17
Investments			
Esmeralda Power Company		$ 25,000.00	
Tonopah Mines Hospital Association		2,500.00	
Interest in sundry patents		12,898.09	
			$ 40,398.09
Available assets			
Materials and supplies for operation			
Stores on hand at mine	$134,497.76		
Stores on hand at mill	27,410.12		
		$ 161,907.88	
Ore stock on hand			
Ore on hand at mine	$ 39,540.78		
Ore on hand at mill	4,626.46		
In absorption at mill	107,750.40		
		151,917.64	
Accounts receivable			
Due from smelters	$277,388.30		
Due from sundry parties	15,821.05		
Cash in banks	991,920.09		
Collateral loans	250,000.00		
		1,535,129.44	
Total available assets			1,848,954.96
Charges paid in advance			2,964.21
			$4,590,571.43

LIABILITIES

Capital stock		
1,500,000 shares of $1 each, fully issued		$1,500,000.00
Current liabilities		
Accounts payable	$91,052.10	
Unpaid wages	44,753.16	
Accrued charges	18,592.64	
		154,397.90
Reserve for depreciation		
Of mine and mill equipment		176,378.66
Balance of special reserve		
After writing down the book values of Tonopah mill and of shafts, buildings, and machinery at mine		633,031.54
Undivided profits		
Balance of net income available for the payment of dividends or otherwise		2,126,763.33
		$4,590,571.43

Having audited the books and accounts of the Tonopah Belmont Development Company and of the Belmont Milling Company, kept in the City of Philadelphia for the year ended February 28, 1914, we hereby certify that the above Balance Sheet is correct.

GEORGE WILKINSON & COMPANY,
Certified Public Accountants

PHILADELPHIA, PA., March 26, 1914

COMPARATIVE STATEMENT OF OPERATING EXPENSES OF MINE BY MONTHS

TONOPAH BELMONT DEVELOPMENT COMPANY

MARCH 1, 1913, TO FEBRUARY 28, 1914

COMPARATIVE TOTALS

MARCH 1, 1912, TO FEBRUARY 28, 1913

	January Amount	February Amount	Totals Amount	Per Ton
Development direct				
Miners	$ 8,504.61	$ 9,307.33	$ 87,650.63*	.508
Muckers and trammers	4,265.08	3,819.19	43,236.82	.251
Timbermen and helpers	2,118.69	1,160.67	19,542.86	.113
Stoping direct				
Miners	7,272.12	7,142.30	92,218.73	.534
Shovelers	4,482.88	4,546.90	51,607.53	.299
Trammers	2,795.62	2,682.76	27,196.08	.158
Timbermen and helpers	8,902.27	8,669.86	114,321.67	.662
Filling	489.69	721.58	7,964.31	.046
Piston drills, repairs and maintenance	261.37	343.12	7,985.06	.046
Stoping drills, repairs and maintenance	308.10	405.39	5,736.50	.033
Steel and sharpening	1,410.41	1,423.42	15,775.33	.091
Explosives	7,715.96	7,843.45	75,116.88	.435
Hoisting to surface	3,072.22	2,879.13	44,477.99	.258
Auxiliary hoisting	184.72		6,650.97	.039
Ore sorting and loading	1,064.15	938.36	12,155.26	.070
Sampling and assaying	482.82	740.30	7,384.24	.043
Surveying	646.83	720.95	6,560.59	.038
Superintendent and shift bosses	1,325.00	1,343.75	15,145.07	.088

	January Amount	February Amount	Totals Amount	Per Ton
Mine office	1,215.51	1,431.33	15,549.36	.090
Surface and plant	1,797.68	1,432.02	15,251.68	.088
Lighting	706.99	667.38	6,958.11	.040
Heating	826.86	754.31	8,632.08	.050
Drayage	200.45	222.20	2,837.79	.016
Maintenance and repairs of buildings	106.25	33.06	687.44	.004
Maintenance and repairs of machine and machine tools	97.59	32.99	1,954.23	.011
Maintenance and repairs of pipe lines and tanks	229.52	178.35	4,237.42	.025
Maintenance and repairs of railroad spurs		15.60	60.12	.000
Pumping	1,452.92	1,754.98	20,284.80	.118
Ventilation	1,065.27	1,114.74	8,743.44	.051
Total cost direct mining	$63,001.58	$62,325.42	$725,922.99	4.205
Administration	817.54	834.06	10,213.16	.059
Taxes and insurance	1,489.30	1,462.98	17,488.09	.101
Legal and traveling expense	312.74	483.92	3,497.82	.020
Bullion tax		3,000.00	39,206.79	.227
Depreciation	1,252.37	1,252.37	15,028.44	.087
Total cost indirect mining	3,871.95	7,033.33	85,434.30	.494
Total operating cost	$66,873.53	$69,358.75	$811,357.29	4.699

* The figures in this column include those for the last 10 months of 1912, as well as those for the 2 months of 1913 as shown.

ACCOUNTS FOR INSURANCE COMPANIES

LIFE INSURANCE

INSURANCE CONTRACTS

1. **Insurance** is a contract whereby, for a stipulated consideration, one party agrees to compensate or indemnify the other for loss on a specified subject by a specified amount. The **insurer**, sometimes called the *underwriter*, is the one agreeing to indemnify. The **insured** is the one to whom the promise runs. The **premium** is the agreed consideration. The **policy** is the written contract. The **risk**, or **peril**, is the event insured against. The **insurable interest** is the subject right or interest to be protected.

2. **Life insurance** is a contract to pay a designated or determinable person a certain sum or an annuity in the event of the death of the person whose life is insured. There are numerous standard forms of life insurance, some of which have proved more popular than others. The policy privileges may be enumerated under the *straight-life plan*, and the *endowment plan.*

3. The **straight-life policy** is one under which the insured pays a given yearly premium for life, the cost of same depending on his age at the time of taking the contract.

4. The **endowment policy** is one under which the insured will receive the face value if he lives a certain number of years

and under which his heirs will receive the face value if he dies before the expiration of that number of years. Under this policy, the annual premiums must necessarily be higher than under the straight-life plan; they may be made to extend over the life of the policy or, on higher rates, over a shorter term. For instance, a 20-year endowment policy may have the premium arranged to be paid over the entire 20 years or during the first 10 years. On either plan the policy is payable at once in case of death.

Under the endowment plan, policies become paid up at a given time, when, if desired, a new paid-up policy may be rewritten for a given amount or other options taken advantage of if desired; for instance, one may elect to take all of the cash due him under the cash-surrender policy, or he may take part cash and paid-up insurance for a definite amount, or he may elect to leave the entire amount in the company and receive annual dividends for a given number of years thereafter.

METHODS OF CONDUCTING LIFE-INSURANCE COMPANIES

STOCK PLAN

5. There are three recognized methods of conducting life-insurance companies: the *stock plan;* the *mutual plan;* and the *mixed plan.*

Under the **stock plan** the shareholders of the company, its proprietors, guarantee that if the premiums charged prove inadequate to pay all claims and expenses they will suffer the loss. In order to make this guarantee good they must, therefore, provide their company with a substantial capital (in addition to the assets contributed by the policyholders), so that if during any year the insurance costs more than they receive they shall have an adequate fund from which to make up the deficiency. Also, as they take the chances of such a loss, the shareholders are entitled to any profits that may accrue.

6. The companies that do business on the stock plan are called **proprietary companies** because they are owned and controlled by stockholders, the policyholders being simply customers. Although this system is for this reason popularly known as the stock plan, it is also designated the *non-participating plan* because under it the policyholders do not participate in profits.

7. The two strongest arguments advanced by the advocates of the stock plan are: The stockholders, having embarked a considerable amount of their own money in the business, will manage it with caution and energy. Not only will the initial cost to the insured be less, but the rate can never by any possibility exceed the rate originally charged.

MUTUAL PLAN

8. When the business is conducted on the **mutual plan**, the policyholder ceases to be a mere customer and becomes a sort of partner. The company may be said to be managed for the benefit of policyholders exclusively. It is true that they must pay higher premiums than on the stock plan, but the advocates of the plan claim that the ultimate cost will be less, because it will be reduced by dividends. The older mutual companies have no capital (over and above their accumulated assets) and the younger companies have only a nominal capital.*

9. The chief arguments advanced by the advocates of mutual insurance are: The plan is absolutely safe, whereas they claim that the stock plan is exposed to dangers that the

* An amendment to the laws of the State of New York, passed in 1853, provided that all companies subsequently organized should have a capital of at least $100,000 invested in government bonds (or other prescribed securities) to be lodged with the government for the protection of policyholders. The incorporators of mutual companies since then, while complying with this law, have been able to organize their business on the mutual plan by appropriate charter restrictions. In such cases, the authority to vote for directors may vest in the holders of the capital, or the policyholders may be given the right to vote, or stockholders and policyholders may have joint control.

mutual company escapes. The ultimate cost to the policyholder is, or ought to be less, under normal conditions.

10. Popularity of Mutual Plan.—However opinions may differ as to the merits of the three systems, it is a fact that the bulk of the business has been transacted for a number of years on the mutual plan by companies organized on the mutual basis. There was a time when the stock plan was exceedingly popular, and it is still popular, but during recent years the volume of business done on the stock plan has been small as compared with the volume transacted on the mutual plan.

MIXED PLAN

11. A company conducted according to the **mixed method** has a capital, which is usually large, in addition to its accumulated assets. It offers its insurance on the *participating plan*. That is to say, the premium charged usually corresponds with that charged by the mutual company; and dividends are similarly returned to the policyholder. But the company does not agree to pay all the divisible profits to its policyholders; it reserves a portion for the shareholders, who are owners of the capital stock. Thus it will be seen that the mixed company conducts its business substantially on the mutual plan, although only a part of the profits go to policyholders, and although the government is like that of the stock company.

12. The defenders of the mixed system claim the following advantages: The government and control are as definite and secure as in the case of the stock company. The zeal of the shareholders will insure so successful a management that after appropriating a moderate percentage of profits they will be able to pay policyholders as large dividends as could a purely mutual company. The large amount of capital stock provides additional security for policyholders.

INSURANCE RESERVE

13. The **reserve** is the amount required by law for an insurance company to have on hand in substantial assets to enable the company to carry out its contracts with policyholders. As the company enters into contracts whereby it agrees to pay to the insured definite amounts at death or at certain times, as at the end of, say, 10 or 20 years, it must set aside for each obligation such amounts as will equal said obligation when it matures. The annuities set aside draw interest and are usually invested in good securities. The law requires that the reserves shall be figured at conservative rates, either 3 or 3½ per cent., according to actuaries' mortality tables, and the lower the rate the greater the amount to be reserved each year. Death claims, according to the mortality tables, average so many per year to the thousand; therefore, the company must so arrange its income and reserves as to pay these claims and still provide for expenses, dividends, and surplus profits.

New obligations are constantly being entered into and a continuous flow of premium money is being received, so it is impossible at any one time to say how much the reserve amounts to. The burden of keeping the reserve in condition devolves upon the actuarial department, and in estimating correct amounts every policy issued must be considered and averaged. The members of this department estimate that such a portion of the annual premium on each policy must be set aside as will be required to accumulate the face value of the policy at the estimated due date. Reserves, as such, are *non-ledger accounts*; that is, they do not appear as such in the ledger, but are so recorded in the annual statements to the various states in which a company transacts business.

BUSINESS OF A COMPANY

METHOD OF HANDLING

14. The success of a life-insurance company depends on the amount of funds it can obtain as premiums from applicants for insurance and the successful investment of these funds. Applications are called **business**, as it is on these applications that policies are issued.

The course of the business as it goes through the various workings of the insurance office is as follows: Contracts are first made with agents who secure the business and the signature of the applicants. When the application is received at the head office, an acknowledgment is made to the agent who sent it. For every application received, a card is made out on which is written the name of applicant, date of application, date received, and the name of soliciting agent. The back of the card provides space for information concerning the medical examination. The application is then delivered to the medical department, where it is passed on by the department heads. This card is kept in a file, and one can always tell by referring to it just how far the application has gone. If the medical department approves the application, a clerk of this department stamps the card as approved on a certain date. The application is then delivered to the accounting department, where several records must be adjusted before it is permanently filed.

ACCOUNTING METHODS

15. The life-insurance company sells but one commodity, protection against death or accident, in return for which it receives from its patrons compensation in the form of cash premiums. The bookkeeping is, therefore, principally concerned with the recording of cash receipts and payments. The insured is required to make his premium payments at stated periods, but if they are overdue it is customary not to show them in the ledger accounts. Of course the overdue premium is

disclosed in the policyholders' ledger accounts by the absence of any credit and the failure to pay a premium automatically lapses the policy and cancels the insurance protection. In the case of death, the company is liable for payment of a death claim, but that is not entered on the books until payment is made, so that nothing but cash transactions are included in the accounts.

The books of account used depend very largely on the character and scope of the transactions involved, though the ones most frequently used are the cash book, the journal, and the ledger, which is the fundamental book. There are, however, numerous subsidiary records, each of which has its functions to perform in the registration of facts and all of these are necessary in supplying the data for accuracy of the ledger accounts.

16. The **cash journal,** or **cash book,** is the principal book used in recording cash receipts. It usually has a number of subsidiaries known as the *home-office cash book*, the *agents' cash book*, the *foreign cash book*, and the *cash-disbursements book*. All money for premiums paid to the home office is entered in the home-office cash book; moneys received from agents for premiums paid by policyholders to the agents instead of direct to the company are entered in the agents' cash book. The foreign cash book is used to record the receipt of moneys from policyholders residing in the districts served by the company's branch offices. The cash-disbursements book records all the cash payments that the insurance company is required to make. The results of the subsidiary cash books are recorded at given periods in the general cash journal and from thence posted to the ledger. Each cash book may be simple in form or have numerous columns, according to the functions that it is called upon to perform. It is the practice of companies, however, to arrange them in columnar form.

17. The **general ledger** of a life-insurance company contains the various real and nominal accounts, the form being the same as that of any ordinary ledger. To the general ledger are posted the footings of the various columns as well as the separate

entries from the cash book. From these accounts are compiled the results and statements required at different periods, monthly, yearly, or oftener.

Separate ledgers, known as the *policyholders' ledgers*, are kept for recording the accounts of policyholders. Practice has shown that either the loose-leaf or card system is best adapted to this particular duty; either system permits the addition or removal of names without inconvenience.

18. A duplicate set of policyholders' ledgers is kept in the actuarial department and contains the same information classified according to types of policies. This is necessary, in order that the actuaries may be sure that there is maintained at all times a proper mathematical reserve against the various classes of policies. Indeed it is the duty of the actuarial department to protect both the insurance company and the insured by the study of statistics and of mortality tables, and of actual facts. This information is a protection both to the company and to the insured, because it enables the company to carry the risk of the insured at the lowest possible price consistent with safety.

19. Agency Records.—The business of a life-insurance company is obtained mostly through its agents, who are compensated by salaries and commissions for the services rendered. The agents are required to make regular reports to the home office, of policies written, premiums collected, renewals, lapses, deaths, and all other information necessary for the company. Various agencies are located throughout the different states at the principal centers and these, in turn, have their local subagencies in places of less importance. All writing of applications, renewals, collection of premium payments are attended to in the district agency. It is obvious, then, that credit accounts must be kept at each agency for the various persons insured, in order that the agency and its subagencies may keep in touch at all times with the policyholders and make collections at proper times in accordance with the policy contracts.

20. Liabilities.—Reserves, death claims, and matured endowments not settled must be listed as liabilities. Dividends

left with the company (the company acting as a sort of banker) must also be shown as a liability, as the company is simply a depository for the benefit of the assured. When interest on policy loans is collected in advance, at the end of each year a certain portion is yet unearned, hence it is a liability and must not be overlooked. Medical fees due, taxes that have accrued, and sundry bills that are due constitute other liabilities. These are followed by the capital stock and the balance or surplus. The surplus account represents the sum of dividends that are apportioned to the various policies, and the amount accruing to the stockholders. In mutual life-insurance companies, all the surplus belongs to the policyholders and is included in the various fund accounts.

Premiums paid in advance of due date, if any, constitute a liability of the company. If the insured dies before his full annual premium is paid, the company deducts the unpaid portion from the claim; on the other hand, should a premium be paid in advance the company would have to refund, hence this amount is a liability.

21. A **trial balance** is taken monthly. One taken as of December 31, is as follows. The items therein are classified under income, disbursements, assets, and liabilities. Cash-Premium Renewals Accounts represents the income from renewal premiums. First Year's Premiums Account represents the income on business for the first year only. The sum of these two is usually the basis for taxation by the various states. The various interest accounts explain themselves. Rent Received is income from rentals by sublease. Miscellaneous Account is a suspense account usually representing income (renewal premiums) held awaiting proper adjustment; it is a resting place for cash received without letters of advice. All dividends applied to the purchase of paid-up insurance are both an income and a disbursement; as the same amount appears in either case, this is more a statistical account than one to show loss or gain. The Mutual Life and Trust Account represents receipts from an old account once charged off.

TRIAL BALANCE

MODERN LIFE INSURANCE COMPANY

DECEMBER 31, 1914

INCOME	*Debits*	*Credits*
Cash premium renewals		$ 355,764.76
First year's premiums		159,176.02
Interest on notes and policy loans		11,876.35
Interest on mortgages		58,305.67
Interest on bonds		449.75
Rent received		1,741.00
Dividends applied to purchase of paid-up insurance		99.00
Modern Life and Trust Company		74.97
Miscellaneous accounts		100.09
DISBURSEMENTS		
Cash-surrender values	$ 20,601.55	
Dividends paid policyholders	3,750.74	
Death claims	30,610.00	
Matured endowments	19,634.00	
Supplementary contracts not involving life contingencies, paid	1,050.00	
Dividends applied to purchase of paid-up insurance	99.00	
Dividends applied to pa renewal premiums	1,219.15	
Premium notes, lapsed y	759.19	
Advertising	1,377.72	
Agents' commissions, first year	105,050.42	
Agents' commissions, renewals	12,672.48	
Actuary fees	2,000.04	
Commuted renewal commissions	750.00	
Dividends to stockholders	8,000.00	
Department fees	1,722.48	
Fees for collection	1,313.96	
Furniture and fixtures	1,448.58	
Incidentals	2,711.93	
Inspection of risks	1,457.48	
Legal fees	1,078.39	
Medical examination	16,117.54	
Municipal and state licenses	49.50	
Postage and expressage	3,247.97	
Printing and stationery	4,274.19	
Rent	3,361.00	
Reinsurance on renewals	1,189.95	
Reinsurance first year	305.80	
Salaries to managers	15,620.04	
Salaries to clerks	14,185.84	
Salaries and allowances to agents	13,456.70	
Telegraph and telephone	579.56	
Taxes, first year	2,292.90	
Taxes, renewals	4,936.67	
Taxes, capital stock	2,070.00	
Taxes, real estate	3.77	
Taxes, miscellaneous	7.37	
Traveling expenses	1,928.91	
Bad debts	4,523.25	

Assets		
Agents' accounts	$ 42,274.32	
Bonds	5,055.37	
Cash in home bank	16,024.66	
Cash in outside banks	11,625.51	
Policy loans	180,991.09	
Mortgages on real estate	1,089,707.30	
Due from officers	60.00	
Premium notes, first year	1,556.84	
Premium notes, renewals	2,039.46	
Northern office, cash	100.00	
Liabilities		
Joseph Danforth, fees unpaid		203.84
Profit-and-loss account (including capital $100,000)		1,067,101.17
	$1,654,892.62	$1,654,892.62

22. The disbursements are usually classified as Amounts Paid Policy Holders and Other Disbursements. Under Amounts Paid Policy Holders is included amounts paid for the surrender of policies, amounts paid as dividends, death claims, matured endowments. Supplementary Contracts is an account representing amounts paid on instalment policies; that is, where the payment of a death claim is spread over a term of years. Premiums Notes Voided by Lapse represent all notes charged off where the assured failed to pay their premiums. Under Disbursements are other items, but the titles in most cases explain themselves. The accounts show expenditure or payments to soliciting agents, amounts paid stockholders, salaries to officers and clerks, department fees, legal and inspection fees, amounts paid to medical examiners, general expense charges, various amounts paid for taxes; the sum represents all expenses outside of those paid as benefits to policyholders.

23. Mortgage loans, as a rule, represent the greatest portion of the assets of a company. Insurance companies are not allowed to invest in second mortgages, hence the mortgage account represents a good investment. Policy loans represent money loaned on the security of the company's policies. The amount of loan on a policy plus interest should not be greater than the reserve belonging to it. Interest on policy loans is usually collected in advance, otherwise the company would lose by borrowers lapsing their policies.

24. The various Premium Notes Accounts represent personal notes given by the assured, and are not admitted as assets unless the reserve on said policies is in excess of the notes received. This is true with the agents' accounts also. In the statement appended, only a portion of agents' account has been deducted as not admitted, although the practice is to deduct the whole amount. In this way a company practically establishes a secret reserve, as most of these accounts are paid at a later date. Furniture, fixtures, and supplies are not admitted, as it would be practically impossible to use these in liquidation of policy claims.

25. Sample Statements.—The accompanying statement shows the manner of presenting information for publication. It shows the receipts and disbursements for the year as well as the assets and liabilities. The auditor's report is also attached.

REVENUE ACCOUNT

YEAR ENDING DECEMBER 31, 1913

RECEIPTS

Premiums	$10,881,232.62
Interest and rents	3,326,671.35
Supplementary contracts	443,532.02
	$14,651,435.99

DISBURSEMENTS

Death claims, less $45,000 reinsurance	$ 3,282,889.18
Matured endowments, less $10,000 reinsurance	399,789.00
Surplus returned to policy holders in dividends	2,078,191.67
Surrender and canceled policies	1,263,634.86
Total payments to policy holders	$ 7,024,504.71
Claims under supplementary contracts not involving life contingencies	246,770.65
Commissions and agency expenses	1,239,788.25
Medical examinations and inspection of risks	101,611.95
Investigation of policy claims and legal expenses	5,500.32
Salaries of officers and home-office employes	295,934.00
Rents, home office and agencies	99,351.10
Advertising, printing, stationery, postage, telephone, telegraph, express, and furniture	121,560.22
Federal and other taxes, fees, and licenses	224,252.95
All other insurance expenses	22,624.36
Expenses on real estate	25,175.93
Net expenses of mortgage-loan agencies	4,679.62
Profit and loss	2,097.53
Decrease by adjustment in book value of ledger assets	135,160.77
Excess income over disbursements, increase in ledger assets	5,102,423.63
	$14,651,435.99

BALANCE SHEET

ASSETS

Mortgage loans	$28,161,854.00
Policy and premium loans	12,024,797.38
Real estate	961,500.00
Railroad and other bonds, market value	27,228,852.00
Railroad stocks, market value	451,158.00
Cash in banks, $2,101,373.33 at interest	2,393,627.14
Cash in office	1,826.78
Net deferred and uncollected premiums	1,361,731.27
Interest due and accrued	1,138,466.11
Gross assets	$73,723,812.68

LIABILITIES

Reserve, Massachusetts standard	$66,066,293.00
Policy claims awaiting proofs, $175,878.95; in course of settlement, $58,227.14	234,108.09
Policy claims of 1913, reported to Company in 1914	52,223.00
Supplementary contracts	699,540.30
Unpaid dividends	106,945.30
Accumulated dividend fund, subject to insured's order	1,395,031.19
Dividends apportioned in 1913, payable first 5 months of 1914	1,005,707.14
Federal and state taxes, payable in 1914, estimated	191,689.47
Premiums, $60,057.89; interest, $1,146.36; paid in advance	61,204.25
Unpaid expenses, bills not presented	45,444.64
Surplus, December 31, 1913	3,865,626.30
	$73,723,812.68

New insurance paid for in 1913, 16,357 policies, $39,721,961
Insurance in force, 144,024 policies, $328,578,136.

SPRINGFIELD, MASS. January 21, 1914.

The receipts, disbursements, and balances of the Massachusetts Mutual Life Insurance Company for the year 1913, as shown by the foregoing statement, have been carefully audited under our supervision and found to be correct, and we have personally examined and verified the Company's securities.

H. S. HYDE
E. A. GROESBECK } Auditors.
W. S. MARTIN

26. Annual Report to State.—Each insurance company is required to file a comprehensive annual report with the insurance department of every state in which it carries on business, and these reports are of course subject to careful scrutiny by the various insurance commissioners. The report forms are about the same in all states and require an exhaustive description of the company's business, including assets and liabilities, income and expenditures, investments, reserves, insurance risks, death claims carried and paid, classes of policies, and classifications of risks carried, etc.

The form required in Pennsylvania is a book containing 44 pages $11\frac{1}{2}$ inches by 16 inches. Every page has to be used

to impart information; on page 1 is to be given the names of the officers and directors. In order to provide specific information on insurance accounts and reports, pages 2 to 10 of this report are reproduced in Fig. 1 (*a*) to (*i*).

FIRE INSURANCE

27. **Fire insurance** is a contract to pay all, or a certain part of, any damage that may be done by fire to an insured property. Fire-insurance companies, or the companies that give this protection are organized in the same manner as other business corporations, though under special state insurance laws.

28. **Classes of Risks.**—Fire-insurance companies have all risks carefully classified, and the rate of premium charged depends largely on the classifications. Classification is based on the location, condition of surrounding buildings, proximity to hazardous risks, construction and use of building, furnishing, goods handled therein, public and private fire protection, etc. The companies have each city carefully surveyed and mapped so that every location and risk is not only clearly set forth in its maps but accurately surveyed, inspected, and described from top to bottom, including foundation, roof, surroundings, and all moral hazards.

29. **Premiums, Reserves, and Reinsurance.**—The insurance premiums received by the company for fire risks is generally paid in advance, instead of at stated periods as in a life-insurance company. This premium covers the full term of the policy, whether it is for 1, 3, or 5 years, or perpetual, and therefore cannot all be considered as earnings, for the current year. That portion that has already been earned, according to months in force, may be considered as earned income for the period, while the remainder must be held as a reserve for possible fire losses during the years that the policy has yet to run. If the policy is for 1 year only and expires at the end thereof,

86. Decrease in book value, per item 48 (*a*), page 3
87. From change in difference between book and market value during the year
88. Total loss carried in

STOCKS AND BONDS

Gains

89. Profits on sales or maturity per item 42 (*b*) and (*c*), page 2
90. Increase in book value, other than for accruals, per item 43 (*b*) and (*c*), page 2
91. From change in difference between book and market value during the year
92. Total gain carried in

Losses

93. Loss on sales or maturity, per item 47 (*b*) and (*c*), page 3
94. Decrease in book value, other than for amortization, per item 48 (*b*) and (*c*), page 3
95. From change in difference between book and market value during the year
96. Total loss carried in
97. ________on other investments, viz.:*
98.
99.
100. ________from assets not admitted excepting item 43, page 4*

MISCELLANEOUS

101. Net*________on account of total and permanent disability benefits or additional accidental death benefits included in life policies
102. ________from all other sources (give items and amounts*):
103.
104.
105. ________unaccounted for*
106. Total gains and losses in surplus during the year $ $

SURPLUS

107. Surplus December 31, 191 , per item 45, page 5, of the annual statement for said year
108. Surplus December 31, 191 , per item 47, page 5
109. ____crease in surplus, enter in column to balance
110. Totals $ $

INTERROGATORIES REGARDING NEW BUSINESS

111. Expected death losses during 191 on all policies issued during said year per mortality tables used by the Company in computing its premiums $
112. Death losses incurred during 191 on said policies, not deducting reserves $
113. Reserves released during 191 on lapsed policies on which premiums for not more than one year has been paid less $________being cash value, or the value of term extension or paid-up insurance allowed thereon

114. Loading on first year's premiums on policies issued in 191 , averaging______per cent. of the gross premiums $
115. Expenses specifically chargeable to first year's insurance, viz.:
116. Commissions on first year's premiums $
117. Compensation not paid by commission, for services in obtaining new insurance, exclusive of salaries paid in good faith for agency supervision either at the home office or at branch offices
118. Medical examinations and inspections of proposed risks
119. Advances to agents
120. Total $

General Interrogatories Regarding Gain and Loss Exhibit

121. Does the company value on the full level premium reserve system, the preliminary term, the modified preliminary term or the select and ultimate basis? Answer,
122. If the Company uses more than one of the above methods, give the amounts of insurance and reserve under each method
123. Has the company ever issued both non-participating and participating policies? Answer,
124. Does the Company at present issue both non-participating and participating policies? (If the company does not at present issue both, state which kind is issued.) Answer,
125. Give the amounts of insurance in force under each of these plans, stating separately amounts of annual dividend business and deferred dividend business respectively
126. Has the Company any assessment or stipulated premium insurance in force? Answer,
If so, give the amount thereof, $
127. Gains, deducting losses, of the Company for the year of statement attributable to policies written after December 31, 1906
Attach statement showing precise method by which the calculation has been made $

Fig. 1 (*h*)

Premium Note Account

1. Premium notes, loans, or liens, on hand December 31st of previous year $
2. Received during the year on new policies, $______; on old policies, $______
3. Restored by revival of policies
Total $
Deductions during the year as follows:
4. Used in payment of losses and claims $
5. Used in purchase of surrender policies
6. Voided by lapse
7. Used in payment of dividends to policy holders
8. Redeemed by maker in cash
9. Total reduction of premium note account
10. Balance of note assets at end of year $

the premium received thereon will be considered as entirely earned and included as revenue for the year; but if the policy (beginning on, say, June 30 of the current year) continues over a term of 3 years, then one-sixth would belong to earnings of the first year and five-sixths carried as unearned reserve to meet future losses. The unexpired premium in each case is considered in proportion to the currency of the policy either in months or days.

The fire losses that occur each year are chargeable against the earnings for that year, and the balance represents the net earnings of the company as available for distribution in the form of dividends. The reserve requirements are governed by the laws of each state and necessarily vary to some extent. It must be strictly maintained or the Insurance Commissioner will promptly proceed to wind up the affairs of the company. The Pennsylvania laws require that "the Insurance Commissioner shall calculate the re-insurance reserve for unexpired fire risks, by taking 50 per cent. of the premiums on all unexpired risks that have less than 1 year to run, and a pro rata on all premiums received on risks that have more than 1 year to run."

30. The 80-Per-Cent. Coinsurance Clause.—It is the practice of insurance companies today in well-protected cities to require the property owner to insure his property to at least 80 per cent. of its value. Of course a person may insure his property for as low an amount as he desires, but unless this requirement of the companies is met, in case of any loss the insurance company will consider itself liable for only that portion of the loss represented by the proportion that the actual insurance taken bears to the required 80 per cent. It is an essential principle in fire insurance and companies enforce heavy penalties against those who decline to comply therewith, there being usually an addition to the rate otherwise required. The 80-per-cent. coinsurance clause is briefly explained in the following illustration taken from a circular issued by The Philadelphia Contributionship, the oldest insurance company in America.

THE 80-PER-CENT. COINSURANCE

The Principle of Coinsurance.—Under the principle of coinsurance the owner of a building has his losses paid only in the proportion that the amount of insurance he takes out bears to the amount of insurance that the companies believe he should carry.

Under the 80-per-cent. coinsurance clause, an owner must take out insurance to the amount of 80 per cent., or over, of the actual cash value of the property; that is, the cost of replacing the building at the time of the fire, if he desires to collect in full up to the amount of his policy, any loss that may occur.

EXAMPLE No. 1.—Cost of replacing building	$10,000
80 per cent. of such cost	8,000
Insurance taken out	6,000
Loss	4,000
RESULT.—Amount collected from companies	3,000
Owner fails to collect	1,000

EXPLANATION.—The owner should have taken out at least $8,000 insurance but had only $6,000 and so became a coinsurer for $2,000, the amount of the deficiency; therefore, the companies pay only 6000/8000 (6/8) of $4,000, or $3,000 and the owner himself loses the balance (2/8) of $4,000 or $1,000. The owner's loss might have been avoided by carrying the required amount of insurance, as in the following:

EXAMPLE No. 2.—Cost of replacing building	$10,000
80 per cent. of such cost	8,000
Insurance taken out	8,000
Loss	4,000
RESULT.—Amount collected from companies	4,000

EXPLANATION.—The owner had taken out insurance to the amount of 80 per cent. of the cost of replacing his building, or $8,000; therefore, the companies pay 8000/8000 (8/8) of $4,000, or $4,000 the full amount of the loss.

EXAMPLE No. 3.—If the loss equals or exceeds 80 per cent. of the cost of replacing the building the conditions will be as in the following:

Cost of replacing building	$10,000
80 per cent. of such cost	8,000
Insurance taken out	6,000
Loss	8,000
RESULT.—Insurance collected from companies	6,000
Loss to the owner	2,000

EXPLANATION.—The owner should have taken out at least $8,000 insurance but had only $6,000 and while the companies pay 6000/8000 (6/8) of $8,000 or $6,000, the full amount of the insurance, yet the owner himself has a loss of $2,000 because he was underinsured, and had not heeded the warning of the 80-per-cent. coinsurance clause.

31. The following is made a part of each policy:

REDUCED-RATE AVERAGE CLAUSE

In consideration of the reduced rate at which this policy is written, it is expressly stipulated and made a condition of this contract that this company shall be liable for no greater proportion of any loss than the amount hereby insured bears to 80 per cent. of the actual cash value of the property described herein at the time when such loss shall happen, nor for more than the proportion which this policy bears to the total insurance thereon;

provided, however, that if the aggregate claim for any loss shall not exceed five (5) per cent. of such actual cash value, no special inventory or appraisement of the undamaged property shall be required.

If this policy be divided into two or more items, the foregoing conditions shall apply to each item separately; and if two or more buildings or their contents be included in a single item, the application of the provision as to special inventory or appraisement shall be limited to each building and its contents.

32. Fire-Insurance Accounts.—The following question is from a Pennsylvania examination and is used as a basis for study in the accounts of a fire-insurance company. From the trial balance of the Safety Fire Insurance Company, here shown, prepare a balance sheet at December 31, and the relative income account for the year ending that date; also describe the procedure adopted in verifying the assets and liabilities and make any criticisms in respect of reserves apparently omitted.

TRIAL BALANCE
DECEMBER 31, 1913

Stocks and bonds, book value	$3,000,000	
Mortgage loans	1,000,000	
Interest receivable on mortgage loans	1,000	
Real estate	500,000	
Cash at banks and on hand	300,000	
Uncollected premiums	500,000	
Capital stock		$ 500,000
Unpaid dividends		100,000
Surplus account, January 1, 1913		2,000,000
Gross premiums		3,000.000
Return premiums	5,500	
Income from stocks and bonds		25,000
Interest on mortgage loans		10,000
Rents received		200
Losses	210,000	
Reinsurance premiums	10,000	
Commissions	5,000	
Taxes	4,000	
Salaries	40,000	
Uncollectible premiums	3,000	
Rebates	200	
Real-estate expenses	5,000	
Real-estate losses	3,000	
Postage	500	
Legal expenses	500	
Maps	15,000	
Underwriters' board and tariff associations	30,000	
Inspections and surveys	2,000	
General expenses	500	
	$5,635,200	$5,635,200

33. The question lacks many details that would ordinarily be required to enable one to prepare a satisfactory statement, but this no doubt was the intention of the examiners, as the candidate is required to display his knowledge of fire-insurance accounting without assistance. The book value of stocks and bonds is given, but not the par or market value thereof. Real estate is evidently to be taken at the book value. It is impossible to determine whether or not there is accrued interest on mortgages and bonds, other than the $10,000 shown, and we must therefore take the income from these sources as complete to date. Fire losses for the year amount to $210,000. Return premiums and reinsurance premiums must be deducted from the *gross premiums*, which include premiums received during the year and all reserves carried over from previous years. It is obvious that only part of this amount can be apportioned as earnings for the current year, while the required reserves must be prorated to unexpired risks. This is the crucial test in the problem, and certain conclusions must necessarily be assumed. If the aggregate outstanding insurance was given and classified as to time to run, the prorating of reserve premiums would be an easy matter, but as the examiners have purposely omitted this information, it will be supposed that $750,000 has been earned during the year and that $2,250,000 is the unearned reserve. From this year's earnings are deducted the fire losses, reinsurance, and return premiums. The surplus account is very large when compared with the capital, and no doubt part of it was contributed by the original subscribers. The capital and surplus funds of insurance companies must be invested only in first-class mortgages and gilt-edged securities, on which there is required a given margin of safety.

The main books used by fire-insurance companies are ledger and cash book, the latter with special columns to suit the income and disbursements. There are numerous records kept on cards and in books of various kinds, also reports from agencies, whence the greater part of the business comes.

34. From the trial balance just shown, an income-and-expense account and also a balance sheet may be worked up as follows:

INCOME AND EXPENSE ACCOUNT
Safety Fire Insurance Company
December 31

Expenses		Income	
Commissions	$ 5,000	Premiums earned	$734,500
Taxes	4,000	Income from stocks and bonds	25,000
Salaries	40,000	Interest on mortgage loans	10,000
Uncollectible premiums.	3,000	Rents received	200
Rebates	200		
Real-estate expenses	5,000		
Real-estate loans	3,000		
Postage	500		
Legal expenses	500		
Maps	15,000		
Boards and associations	30,000		
Inspections and surveys	2,000		
General expenses	500		
Total expenses	$108,700		
Balance down, excess of income over expenses	661,000		
	$769,700		$769,700
Fire losses paid during year	210,000	Balance down	661,000
Net earnings for year	451,000		
	$661,000		$661,000

BALANCE SHEET
Safety Fire Insurance Company
December 31

Assets		Liabilities	
Stocks and bonds	$3,000,000	Unpaid dividends	$ 100,000
Mortgage loans	1,000,000	Premiums unearned, not reserve	2,250,000
Real estate	500,000	Total liabilities	$2,350,000
Cash	300,000	Capital stock	500,000
Uncollected premiums	500,000	Surplus, January 1, 1913	2,000,000
Interest accrued on mortgage loans	1,000	Net earnings for year	451,000
	$5,301,000		$5,301,000

Premium Account

Gross premiums received		$3,000,000
Less reserve for reinsurance, estimated		2,250,000
Balance available as income for year		$ 750,000
Deduct:		
Return premiums	$ 5,500	
Reinsurance premiums	10,000	15,500
Balance, premiums earned		$ 734,500

35. Annual Reports and Statements.—An exhaustive annual report and statement must be sent to the Insurance Commissioner of every state in which the company does business. The reports must comply with the laws of said states, in some of which a deposit of securities must be made. This report inquires into every detail of the company's business and financial condition, and furnishes a most exhaustive exhibit of its affairs. In reporting assets, the company is required to deduct those that are not usually available for settlement of fire losses, as furniture, supplies, printed matter, etc., the company's own stock owned or loans made thereon, bills receivable past due, agents' balances after a brief time has elapsed, loans on personal security, book values or ledger assets over market value, etc. The insurance department is always exacting, and any assets not capable of realizing full value on forced sale are either omitted or reduced to a safe working basis. All liabilities, no matter how small, of a real or contingent nature, must be accounted for, and all fire losses unpaid, whether in dispute or not, must be included at the face value of risks.

The form does not differ very much from the one already shown for life-insurance companies, but in order to show the usual accounts required, the accompanying reproduction of pages 2 to 9 of the Pennsylvania form are shown in Fig. 2 (*a*) to (*h*).

per Liability Exhibit, page 5

43. Interest and rents earned during 191 $

PROFIT ON INVESTMENTS

44. Gain from sale of ledger assets, per item 26, page 2 $
45. Gain from increase in book value of ledger assets, per item 27, page 2
46. Gain from change in difference between book and market value during 191
47. Gain from other investments, viz.: give items and amounts
48.

49. Profit on investments during 191

50. Investment income earned during 191 $

LOSS ON INVESTMENTS

51. Loss from sale of ledger assets, per item 39, page 3 $
52. Loss from decrease in book value of ledger assets, per item 40, page 3
53. Loss from change in difference between book and market value during 191
54. Loss from other investments, viz.: give items and amounts
55.

56. Loss on investments during 191 $

INVESTMENT EXPENSES

57. (*d*) Investment expenses paid during 191 , per disbursement exhibit, page 3, attach exhibit $
58. (*a*) Deduct investment expenses unpaid December 31, 191 , per Liability Exhibit of 191 statement, viz.:
59.

60. Balance $
61. (*a*) Add investment expenses unpaid December 31, 191 , per Liability Exhibit, page 5, viz.:

62.

63. Investment expenses incurred during 191

64. Investment Losses and expenses during 191

65. (*b*) ________from investments during 191 $ $

MISCELLANEOUS EXHIBIT

	Gain in Surplus	Loss in Surplus
66. Dividends declared to stockholders during 191		$
67. Dividends declared to policyholders during 191		
68. Receipts from home office	$	
69. Remittances to home office		
70. ____crease in special reserves		
71. (*a*, *b*) ________from other sources:		
72.		
73.		

74. Net (*b*)________from items 66 to 73

75. Total gains and losses in surplus during 191 $ $

76. Surplus December 31, 191 , per item 29, page 5, of 191 statement

77. Surplus December 31, 191 , per item 28, page 5

78. ____crease in surplus during 191 , enter in column to balance

79. Totals $ $

80. Per cent. of losses incurred to premiums earned________

81. Per cent. of underwriting expenses incurred to premiums earned________

82. Per cent. of investment expenses incurred to interest and rents earned________

83. Per cent. of total losses and expenses incurred and dividends declared to total income earned________

(*a*) Give statement number of each item or portion thereof included herein.
(*b*) Write Gain or Loss.
(*d*) Include in this item one-eighth of 1 per cent. of the mean invested, assets; repairs, expenses, and taxes on real estate; such other taxes and fees as apply to investments and personal property only; and such other items, if any, as are known to apply exclusively to the assets of the Company.

Fig. 2 (*h*)

MUNICIPAL ACCOUNTING

INTRODUCTION

GENERAL EXPLANATIONS

1. From the earliest times of which historical records remain, various peoples have found it convenient, or perhaps comfortable because of the resulting feeling of security, to congregate in communities which ultimately developed into cities, the earliest form of municipalities. In Greece such cities assumed the functions of sovereignties, and in Italy the City of Rome became truly sovereign and may be said to have ruled the world.

In the Middle Ages, the cities of Europe, including England, lost much of their importance and, with the exception of certain cities in Italy and others in Northern Germany favorably located for trade, left no impression upon the times. With the passing of feudal powers, the cities by degrees acquired local charters and became the important and influential communities that are now recognized.

In the United States, many of the cities antedate the Revolution, having been established under authority of royal grants or charters. Upon the creation of the several states, the sovereignty theretofore vested in the English Crown reverted to the people, whose representatives formed legislative bodies, generally known as legislatures. Since the formation of states, cities have been created by the legislatures, under the authority of general laws or special acts conferring charters upon the municipalities. These charters will be more fully described in later pages.

2. Development of Municipal Accounts.—Records are extant which indicate that in the earliest times cities kept records which perhaps met all of their requirements.

In later times the methods applied to municipal accounts did not progress as rapidly as did the municipalities in numbers, wealth, and population. Only within the last quarter of the nineteenth century have accountants shown an active interest in the accounts of municipalities and made persistent and systematic attempts to place the accounts of cities on the same scientific basis required by private business concerns. Progress in this direction has been fostered by the Federal Bureau of Census; the Bureau of Municipal Research, a privately controlled organization having its headquarters in the City of New York; many leagues or organizations of municipalities and accountants; and by the Bureau of Municipal Accounts, a department in the office of the Comptroller of the State of New York, and similar governmental agencies.

In the course of the application of modern methods of accounting to cities, it soon became evident that uniformity in the accounts of cities was desirable to the end that reports to the central authority should be uniform and readily adaptable for comparative purposes. This fact directed attention to the lack of uniformity in accounting terminology and prompted the Census Bureau to adopt standard terms, which are now included in the publications of that department.

A discussion of accounting terminology, with definitions of terms, may be found in the 1906 and 1907 census reports on Financial Statistics of Cities Having Populations of Over 30,000.

3. Definitions.—**Accounts** are systematic records or statements of facts, usually of a financial character, either similar or dissimilar, and so arranged as to provide summaries or balances.

Accounting is the art of recording, classifying, summarizing, analyzing, and interpreting facts relating to the acquisition, production, transfer, and ownership of articles of wealth or value.

Municipal accounting is the application of accounting methods and principles to the business of municipal corporations.

Corporations are legal entities created by or under authority of law and are either private or public.

Private corporations embrace that large class of business organizations, now so common, which are principally engaged in the pursuit of gain, although there are many private corporations engaged wholly in charitable, religious, and educational work.

Municipal corporations are subdivisions of the state, created by or under authority of the laws of the state and endowed with more or less power of local self-government. There are, however, certain subdivisions of the state exercising limited powers of local self-government, which are not in fact municipal corporations and are known as *quasi-corporations.* These embrace special tax districts, school districts, and, in some states, parishes or counties.

Unlike private or business corporations, municipal corporations are not empowered to engage in business for profit; but they are frequently permitted to engage in the conservation or the production and sale of certain commodities, such as water, gas, electricity. When so authorized, it is assumed that the service will be rendered to the consumer at the least possible cost and at rates that will prevent a deficit without creating a profit.

4. Function of Municipal Accounts.—The chief function of a system of municipal accounts is the preservation of systematic records that will promptly disclose the cost of government for a fiscal period and that will furnish reliable data for future planning. When a plan of financial operation in the form of a budget has previously been adopted, the accounts should show the results of the plan and furnish the responsible officers with information upon which to base future budgets.

5. Comparison Between Private and Public Accounts.—The ordinary business corporation is organized with the aim of selling its product to the consumer at the highest price obtainable and of distributing its profits in the form of

dividends to its stockholders. Such a corporation requires and usually maintains a profit and loss account.

The municipal corporation aims to give the greatest amount of public service to the citizens within its boundaries at a minimum cost, hence it needs no profit and loss account, but may require accounts showing surplus or deficiency. The officers of private corporations may expend corporate funds for any purpose within the scope of the corporate organization and are rarely limited by a budgetary program. The officers of municipal corporations may expend its funds only for public purposes and within the limits fixed by the charter or the financial plan previously adopted. Hence, private corporations need no appropriation accounts, although such accounts are an essential feature in a modern system of municipal accounting.

The variances between public and private accounting do not relate to differences in methods, but rather, to the subjects concerning which information is sought. In both cases, the fundamental purpose of keeping accounts is the same. The officers of each class of corporation desire to know the cost of carrying on the business. The managers of the private corporation desire to know whether or not the business is being so conducted as to produce dividends for its stockholders; the officers of the public corporation, whether or not the business of the municipality is being conducted within its income. In both cases, the methods must be such as will enable the accounting officers, whether public or private, to supply with the least delay complete and accurate reports. Although differing in details, the principles underlying public and private accounting are the same.

6. Methods of Accounting.—Until very recently the local officers of nearly all municipalities in the United States have been content with systems that disclosed merely the flow of cash in and out of the municipal treasury. Without any attempt at uniformity, each system reflected the notions of the individual charged with the duty of keeping the accounts, or, as was frequently the case, the practice of a predecessor. That a system of accounts which merely records cash receipts and

cash disbursements is incomplete and inadequate is now generally admitted; and, in place thereof, systems are being adopted that will show not only cash received, but also revenue accrued, and not only cash paid out, but also expenses incurred.

In commercial bookkeeping on a large scale, the single-entry set of books has long since been discarded and double-entry substituted. Double entry permits the use of real and nominal accounts, which provide an internal check on the clerical work, and make possible the preparation of trial balances and balance sheets from the information contained in the books.

In attempting to record all the details of a municipality's financial transactions in a general ledger, such a book becomes unwieldy and unsuitable for handling. To obviate this difficulty, the controlling account has been evolved, by means of which the details are found in subsidiary ledgers. In other words, a **controlling account** is an account that shows, in summary form, items that appear in detail in other accounts.

MUNICIPAL CORPORATIONS

7. Classification.—In New York State the term **municipal corporation** is defined by statute to include counties, cities, towns, and villages. By the constitution of the same state, cities are classified, according to population, as first class, second class, and third class.

Cities, counties, towns, and **villages** are all defined as municipal corporations comprising the inhabitants within their respective boundaries, and formed for the purpose of exercising such powers of local government as may be conferred or imposed by law.

Of the four classes of municipalities, cities possess the largest measure of local self-government and present the greatest variety of problems to the accountant.

In the following pages it is intended to take the third-class cities in the state of New York as types and to outline a plan of accounting readily adaptable to the cities of that class.

No attempt will be made to outline systems recording the transactions of public utilities, such as gas and electricity, for

the reason that such, ordinarily, are under the jurisdiction of public service commissions, and their accounts and reports must follow the regulations prescribed by the commissions.

For a system of accounts for waterworks, the reader is referred to the uniform classification of accounts adopted by the American Water Works Association and by the Bureau of Census.

8. **Organization of Cities.**—Cities are organized or created by acts of state legislatures, which are usually known as charters. In the case of each city, the charter is the fundamental law which confers and defines its powers. Being a creation of statute, a city has only such powers as are expressly granted to it by its charter, or such as may be implied from the powers granted.

9. **Features Common to All Cities.**—In all cities the powers are divided between executive and legislative branches. The executive powers are usually entrusted to a mayor, or to some other officer by whatever name known. The legislative powers are usually entrusted to a board or commission known as the council, board of aldermen, or by some other similar title. Nearly all cities have a third subdivision, known as the judiciary, which is not a coordinate branch of the city government and bears no resemblance to the third branch of the Federal government which is known by the same name.

The principal source of revenue of all cities is a property tax levied against the real property within the city limits, according to the assessed valuation, which is determined by a local officer or board known as assessor or board of assessors, as the case may be. Other revenue is derived from taxes levied or assessed against particular classes or certain kinds of property; for example, bank taxes, mortgage taxes, liquor taxes, and income taxes. Other revenue is also derived from the sale of privileges, such as special franchises, vendors' licenses, amusement permits, and dog licenses.

Cities are usually permitted to procure funds to meet current expenses by means of temporary tax loans. Although the proceeds of such loans increase the cash in the city treasury, the

moneys so received are not revenues. The power to borrow money, however, is not inherent in cities, and does not exist unless expressly granted in the charter or by a general law which applies to all cities.

Other receipts include the proceeds of sales of bonds, assessments against property to pay for improvements, and funds which are held in trust by the city.

10. Constitutional Limitations on Municipalities. The constitutions of many states impose limitations on the powers which may be granted to municipalities, including cities, and in the constitution of the state of New York the limitations are found in Section 10 of Article VIII.

The charters of the cities of the third class in the state of New York are not uniform. The cities, however, are classifiable as follows:

Group A, where the municipal activities are practically all administered by a government having one executive head and a single set of financial officers, and in which the various departments are subject to one control or supervision.

Group B, where the administration of municipal affairs is distributed among a number of more or less independent but correlated commissions or boards.

Group C, where the administration of municipal affairs is vested in commissioners who, acting collectively, constitute the council, and individually are heads of various departments. This method is commonly designated as the *commission form* of government.

11. Group A Charters.—The following is an analysis of the charter of a city typical of those within Group A.

The executive power is vested in a mayor, elected by all the voters of the city for a term of years named in the charter and usually paid a salary in an amount prescribed in the charter. He is required to enforce the laws of the state and the ordinances of the Common Council and may appoint and at pleasure remove the heads of the administrative departments.

In his capacity as manager of the affairs of the city, the mayor is assisted by an advisory board known as the Board of

Estimate and Apportionment, usually composed of the mayor, president of the Common Council, comptroller, corporation counsel, and the city engineer.

The same officers who constitute the Board of Estimate and Apportionment, except that the commissioner of public works is substituted for the president of the Common Council, constitute the Board of Contract and Supply, which is charged with the duty of letting contracts for the performance of any work or for the supply of any material required by or for the use of any officer, board, or department of the city in all cases where the expense of such work exceeds a sum specified in the charter.

The administrative officers are comptroller, treasurer, corporation counsel, city engineer, commissioner of public works, and commissioner of public safety, who are elective or appointive as the charter may prescribe.

The comptroller is the auditing officer, to whom all claims against the city must be presented for audit and allowance. He is required to superintend the fiscal affairs of the city and to manage the same pursuant to law and the ordinances of the Common Council. He is required to keep a separate account with each department of the city; to draw orders or warrants on the treasurer in payment of audited claims, and to perform such other duties as may from time to time be imposed upon him by law or by ordinance of the Common Council.

The treasurer is tax collector, custodian of city funds, and disbursing officer. No money may be paid out by him, except upon the order or warrant of the comptroller, and he is required to render to the comptroller daily a statement of all moneys received and paid out by him.

The corporation counsel is required to be an attorney and counsellor at law. He is the legal adviser of the Common Council and of the several city officers and is required to appear for and protect the rights and interests of the city in all actions and proceedings brought by or against it.

The commissioner of public works is the head of the Department of Public Works and is charged with the supervision of construction and of repairs to streets, parks, city buildings, and

public places and, in cities owning a system of waterworks, usually with the superintendence of such system.

The commissioner of public safety is the head of the fire and police departments, having power to appoint a chief of the fire department and a chief of police, firemen, and policemen.

Other city officers having special and limited powers and not directly concerned with the management of city affairs are a commissioner of charities, judges of inferior courts of civil and criminal jurisdiction, assessors, a sealer of weights and measures, and members of a Board of Health.

Nearly all cities also have a Board of Education, consisting of three or more members, usually appointed by the mayor, which is charged with the management and control of the public schools.

The legislative power of the city is vested in the Common Council, composed of aldermen elected from the several wards or subdivisions of the city. The meetings of the Common Council or, as it is sometimes called, the Board of Aldermen, are presided over by the mayor or by a president who, in some cities is chosen by the council from its members, while in other cities he is elected by the electors of the city at the same time and for the same term as the mayor.

The Common Council has authority to choose a clerk, who is also city clerk, and whose duties include the keeping of the minutes of the Common Council and other boards and the issue of licenses, permits, etc.

The principal revenue of the city is derived from taxes, levied by the Common Council, upon an estimate of revenues and expenses previously prepared by the Board of Estimate and Apportionment. Upon the adoption of the estimate it becomes the tax budget and the amounts therein estimated for expenditures become appropriated in the amounts and for the several departments, offices, and purposes as therein specified for the fiscal year. After the adoption of the annual estimate, the city has power to borrow money for the payment of the debts and expenses of the city within the amounts appropriated therefor for the fiscal year, in anticipation of the receipt of the taxes and revenues applicable to such purposes.

12. Group B Charters.—The following is an analysis of the charter of a city typical of those within Group B.

The mayor is the chief executive officer and is vested with authority and charged with the duties generally incident to the office.

The chief fiscal officer is the city chamberlain, who performs such duties incident to the office as the Common Council may direct. He is required to maintain such records as will at all times reflect the status of the various funds of the city, which, in cities of this type, are or may be classified as follows: Fire, Police, Improvement, Sewer, Light, Water, Public Works, Poor, General City, and School. He is required to report monthly to the Common Council as to the financial condition of the municipality.

The officers, other than boards, are city judge, city clerk, city attorney, and city engineer, who are vested with the authority and charged with the duties incident to offices thus designated.

Important administrative functions devolve upon various boards designated as follows: Board of Public Works, Board of Fire and Police Commissioners, Department of Public Instruction, Board of Health, Department of Charities.

The Board of Public Works consists of three members appointed by the mayor. This board is vested with the charge and management of all thoroughfares, sewers, waterworks, light plants, and appurtenances thereto. It appoints an engineer and a superintendent of public works.

The Board of Fire and Police Commissioners consists of three members, appointed by the mayor, who appoint the chiefs of the fire and police departments and several subordinates. The board is charged with the duty of auditing the payroll of call firemen and claims against the fire and police department other than fixed salaries.

The Board of Education consists of three or more members, appointed by the mayor, who have general supervision of all property used in the school system and the moneys raised for public-school purposes. They prepare an annual budget and, when finally adopted, file the same with the city clerk, whereupon the Common Council includes the amount thereof in the

tax and assessment roll for the ensuing year to be collected by the city chamberlain and credited to the general school fund of the municipality.

The Board of Health consists of three members appointed by the mayor; they appoint the city physician and possess the powers of a board of health as defined by statute.

The Department of Charities is under the supervision of a commissioner of charities, who is appointed by the mayor and who investigates all requests for public aid and approves or disapproves of them. He files a statement of accounts and claims periodically with the Common Council, which possesses the power of audit in relation to the same.

The legislative power is vested in a Common Council, which consists of the mayor and aldermen, who enact city ordinances and possess the power of audit except in cases where the power is vested in one of the boards established under the provisions of the charter.

13. Group C Charters.—The following is an analysis of the charter of a city typical of those within Group C.

The executive, legislative, and administrative powers in a municipality having this form of government are vested in commissioners. They are five in number, and acting collectively constitute the Council and individually are denominated as follows:

Mayor, who is, ex-officio, commissioner of public affairs and a member of all city boards; commissioner of public safety; commissioner of public works; commissioner of finance; commissioner of accounts.

The mayor, as commissioner of public affairs, is responsible for the enforcement of the laws. He is the presiding officer of the Council and is charged generally with the oversight of all departments, boards, and commissions of the city, the Board of Education being an exception to this general provision.

The commissioner of public safety, as the title implies, has charge and supervision of the police, fire, sanitary, health, charity, and correction departments. Subordinate officers, of which the health officer is an illustration, aid him in the per-

formance of his duties. Collateral duties are imposed upon him by the charter, as, for example, inspection of plumbing, weights and measures, etc.

The commissioner of public works has charge and supervision of all public thoroughfares, public buildings, parks, water department, and all real and personal property owned, leased, or controlled by the municipality not in charge of any other department. He is also charged with the duty of recommending to the council necessary public improvements and has charge of construction of such when authorized.

The commissioner of finance is ex-officio city treasurer and, therefore, has custody of all money coming into possession of or belonging to the city. He is required to maintain proper books of account, so that he may at any time inform the Council as to the financial status of the municipality or of any department thereof. He is the disbursing officer, making payments, however, only upon the order of the Council by certificate of the commissioner of accounts, taking an appropriate voucher therefor. He is ex-officio auditor, and examines and audits all bills payable before they are allowed by the Council. It is also his duty to prepare an annual budget and to present the same to the Council.

The commissioner of accounts is ex-officio city clerk and as such performs all of the duties incident to the office of clerk, including clerk of the Council at its meetings. He is the city collector and is responsible for the proper and prompt collection of taxes, assessments, water and other rents, licenses, fees, and of all money due the city from any source whatsoever. He is also charged with the duty of assessing property located in the city.

The judiciary power is vested in a court having civil and criminal jurisdiction.

The subordinate officers and employes are nominated for positions in the various departments by the commissioner having direct supervision, and the appointment is effective after confirmation by the Council.

The Civil Service Commission is appointed by the Council and is vested with powers incident to such commissions.

THE BUDGET

PURPOSE AND METHOD OF PREPARING

14. Purpose of a Budget.—From an economic point of view, it is generally admitted that municipalities should not permit expenditures to exceed revenues. In other words, it is conceded that a policy of "pay as you go" is better than the practice of first incurring the debt and then raising the money to pay. The better policy has been adopted by the officials of many municipalities and is imposed on many cities by provisions in the charters.

Control over expenditures is obtained by means of a budget, an instrument which has been defined as follows: A **budget** is a formal, complete, and final statement of a financial plan for a fiscal period, showing the authorized expenditures for that period and the estimated revenues and other means of meeting the expenditures.

15. Procedure in Preparing and Adopting a Budget.—Cities that are on a budgetary basis because of charter requirements, must look to the charter for guidance as to the procedure to be followed in the preparation and adoption of the budget. In the case of municipalities other than cities, whose officials desire to adopt the budgetary plan, the governing boards will usually be found possessed of power to provide for the adoption of the plan by rule, ordinance, or local law.

16. In a typical city of the third class in the state of New York, that is to say, a city having a population of less than 50,000, the procedure leading to the preparation and adoption of the budget is, briefly, as follows:

Within 30 days preceding the end of the fiscal year, the heads of all departments empowered to authorize or control expenditures are required to submit to the mayor estimates in writing of the probable revenues and expenditures for the next fiscal year in their departments. Thereupon, the mayor is required

to lay the estimates so submitted to him before the Board of Estimate and Apportionment.

Within 30 days after the commencement of each fiscal year the Board of Estimate and Apportionment is required to make an itemized statement in writing of the estimated revenues and expenditures for the fiscal year; this statement is known as the *annual estimate*. After completion, the annual estimate is submitted to the Common Council by the Board of Estimate and Apportionment, with such explanatory matter as the board may deem necessary.

The Common Council is required to consider the estimate, give a public hearing thereon, and adopt the same as submitted, or it may diminish or reject any item therein contained and adopt the estimate as so amended. The Council may not, however, diminish or reject any item which relates to salaries, the indebtedness, or estimated revenues, or amounts due upon judgments, or to sinking funds, or the estimates submitted by the Department of Education.

When the Council shall have adopted the estimate, it must be entered in its minutes, and the sums therein estimated for expenditures thereupon become appropriated in the amounts and for the several departments, offices, and purposes as therein specified, for the fiscal year.

When the amount required to be raised by tax to meet estimated expenditures is determined, the Common Council is required to levy and raise that amount by a tax against the property liable therefor within the city.

17. Budgetary control is that control which, by means of a budget, the tax-laying board or commission secures over the expenditures of all municipal departments. Upon the adoption of the budget, the sums therein allotted to the various departments become known as appropriations, the amount of each indicating the extent to which each department may incur liability without further authorization or appropriation by the budget-making board. The limitation on the spending power of each department will be found in the city's charter, in a local law or by-law, or in the resolution adopting the budget.

FORM OF BUDGET

18. In its final form, the budget should include appropriations of revenues, as well as of expenditures, so arranged as to correspond in terminology and in classification with the accounting plan. It should be divided into two parts; namely, (1) appropriations; (2) provisions for meeting appropriations.

19. Classification of Expenses.—In the budget and in the accounting plan expenses are classified by *governmental function* and by *objects of expenditure.*

The functional classification and the standard expense accounts are in use in municipalities in the state of New York using systems of accounts formulated by the comptroller of that state.

20. The classification by **governmental function** is based upon the classification adopted by the Bureau of Census in its annual reports of the financial statistics of cities and is as follows:

I. General Government.
II. Protection of Person and Property.
III. Conservation of Health.
IV. Sanitation and Promotion of Cleanliness.
V. Highways.
VI. Charities and Corrections.
VII. Education.
VIII. Recreation.
IX. Public Utilities—Non-Commercial.
X. Miscellaneous.
XI. Municipal Indebtedness.
XII. Construction and Permanent Improvements. (Financed from current revenues.)
XIII. Public Utilities—Commercial.

21. The classification by **objects of expenditure** requires the use of four standard expense accounts, which, in connection with the possibility of further itemization or sub-

division, furnish all the details which reasonably may be required. The four standard expense accounts are as follows:

1. Salaries, Wages, and Fees.
2. Purchase of Equipment.
3. Materials and Supplies.
4. Expenses.

If further itemization be required, the accounts Materials and Supplies and Expenses may be subdivided as follows:

3. Materials and Supplies.
   (*a*) Fuel.
   (*b*) Food.
   (*c*) Other materials (specify).
   (*d*) Other materials (specify).
4. Expenses.
   (*a*) Traveling.
   (*b*) Printing and Advertising.
   (*c*) Maintenance of Equipment.
   (*d*) Office Expense.
   (*e*) Insurance.
   (*f*) Repairs to Buildings by Contract.
   (*g*) Light and Power.
   (*h*) Rent.
   (*i*) Other expenses (specify).
   (*j*) Other expenses (specify).

22. Classification of Receipts.—Receipts are classified as *revenue* and *non-revenue*. **Revenue receipts** include such as are applicable to the current maintenance and support of government, such as taxes, licenses and permits, fines and penalties, interest, rent, departmental earnings, etc.

Non-revenue receipts include the proceeds of temporary tax loans, transfers, refunds, and other receipts which are received and paid by the municipality as a fiduciary, that is to say, as agent or trustee, and in which the municipality acquires no proprietary interest.

23. Further Classification of Expenses and Receipts.—Besides the classification of expenses and of receipts already described, expenses and revenues are segre-

gated or classified by departments. This means that appropriations for expenditure by the mayor are listed under the heading *Mayor,* and appropriations for expenditure by the Common Council are listed under the heading *Common Council,* and so on with each department, and likewise with revenues. If it be expected that receipts will be forthcoming from any department, that fact should be shown in the budget, under the name of the department expected to produce the revenue.

The departmental titles, or headings, must correspond to the names of the offices or departments found in the various municipalities. In almost all instances, however, the titles will bear close resemblance to the titles in the following outline of a budget.

OUTLINE OF BUDGET

24. The following abbreviated form of a budget will show only functional and departmental classification of expenses and sources of income, with the standard expense accounts inserted only after the first subdivision. It must be understood that the expense accounts are used in connection with each department to which they are applicable.

APPROPRIATIONS

I. General Government

Aldermen or Council:
1. Salaries, wages, and fees
2. Purchase of equipment
3. Materials and supplies
   - (*a*) Fuel
   - (*b*) Food
   - (*c*) Other materials
4. Expenses
   - (*a*) Travel
   - (*b*) Printing and advertising
   - (*c*) Maintenance of equipment
   - (*d*) Office expense
   - (*e*) Insurance
   - (*f*) Repairs to buildings contract
   - (*g*) Light and power
   - (*h*) Rent
   - (*i*) Other expenses

Mayor
City manager
Board of Estimate and Apportionment
Board of Contract and Supply
Purchasing agent
City comptroller or commissioner of accounts
City treasurer or commissioner of finance
Receiver of taxes or tax collector
City clerk or clerk of council
Assessors

Law Department—Office of corporation counsel
Civil Service Commission
Office of commissioner of public works
Office of commissioner of public safety
Office of city engineer
Elections
City or municipal court
Municipal buildings and offices
Undistributed expenses

II. Protection of Person and Property

Bureau of Police—Police force
Bureau of Police—Care and maintenance of buildings and grounds
Bureau of Fire—Fire-fighting force
Bureau of Fire—Care and maintenance of buildings and grounds
Bureau of Building Inspection
Plumbing Board
Plumbing inspection
Sealer of weights and measures
Public pound; dog catcher

III. Conservation of Health

Administrative expenses (Board of Health and health officer)
Conservation and Inspection
Public-health laboratory
Isolation hospital or isolation at homes
Auxiliary activities

IV. Sanitation and Promotion of Cleanliness

Bureau of Sewers
Street cleaning
Refuse and garbage collection and disposal
Refuse and garbage disposal plant
Sewage disposal plant
Public comfort stations

V. Highways

Administration of highways—Office of Bureau of Streets or Highways
Snow and ice removal
Highways and bridges—Care and maintenance
Highway buildings

VI. Charities and Corrections

Commissioner of charities or overseer of poor
Outdoor poor relief
Poor in institutions or families
Veterans' relief
City hospital
Correctional institutions
Probation Board or officer

VII. Education

Administration
Elementary schools—Expense of instruction
High schools—Expense of instruction
Other schools—Expense of instruction
Operation and maintenance of school plant
Health service in schools
Auxiliary agencies
General expenses—Schools
Public library

VIII. Recreation

Park Department
Playgrounds
Public baths
Band concerts, celebrations and entertainments
Memorial Day observance

IX. Public Utilities—Non-Commercial

Public market
Public docks
Cemetery

X. Miscellaneous

Judgments and settlements
Refunds of taxes
Deficiencies in collection of taxes
State and county taxes

XI. Municipal Indebtedness

Redemption of debt
Contributions to Sinking Fund
Interest on funded debt
Interest on temporary loans

XII. Construction and Permanent Improvements

Assessments against City property
City's share of assessment work
Other construction items

XIII. Public Utilities—Commercial

Administrative and general expenses
Water debt
Operation and maintenance, Water Department

PROVISIONS FOR MEETING APPROPRIATIONS

I. Estimated Revenues—Miscellaneous Revenues

Special taxes:
  Bank stock taxes
  Mortgage taxes
  Insurance taxes
Licenses and permits:
  Liquor licenses (Excise tax)
  Marriage licenses
  Dog licenses
  Amusement licenses
  Vendors' licenses
  Departmental permits
Fines and penalties:
  Police or city court fines
Interest and penalties:
  On taxes
  On bank balances
Rent of city properties
State apportionment for schools
Departmental earnings:
  City court (fees)
  City treasurer
  City clerk (fees)
  Law department
  Municipal buildings
  Bureau of Police
  Bureau of Fire
  Bureau of Building Inspection
  Sealer of weights and measures
  Board of Plumbing Examiners
  Board of Health
  Street cleaning department
  Public baths
  Commissioner of charities
  City hospital
  Board of Education
  Public library
  Park department
  Public markets
  Public docks
  ....
  ....
Total, miscellaneous revenues

II. Earnings of Commercial Public Utilities

Municipal Water Department:
  Sales of water
  Other revenues
Municipal Lighting Department:
  Sales of current
  Other revenues
Total, earnings of commercial public utilities
Total, estimated revenues

III. Current Surplus of Prior Year

Available for reduction of taxation

IV. Contributions From Sinking Funds

(Give title of each fund)

V. Tax Levy

To balance

Total budget

THE ACCOUNTING PLAN

25. Since the charter provisions of various cities vary in details, it will be found necessary to refer to the charters to know the details required to be exhibited in each particular city. Notwithstanding the variation of details, it will generally be found that, fundamentally, the powers and duties of the officers as a whole are the same and that it is possible to formulate a system of accounts following general principles and permitting such variations in details as the local conditions may require.

BOOKS USED

26. It is assumed that the reader is familiar with the books commonly used in business, such as Cash Book, Journal, and Ledger. The ordinary form of journal and ledger is intended to be used in operating the plan described herein. The Cash Book should be specially ruled by columns developing totals for posting to controlling accounts, the details of which are posted to subsidiary records.

Other books of original entry required are: *Order Register, Claim Register, Warrants Payable Register.*

27. Order Register.—The Order Register is used to enter orders presented to the comptroller for his approval

APPROPRIATION LEDGER

Code N

Account_______________________

before the debt may be incurred. The form is as shown in the Record of Orders and Contracts shown in Fig. 1. As in the Cash Book, totals are developed for posting to the controlling account in the General Ledger and the details are posted to subsidiary records. The totals are posted to the controlling account by means of periodical entries which diminish the appropriations and set up reserves to meet the vouchers when presented.

28. Claim Register.—The Claim Register, the form of which is shown in Fig. 2, is the book of original entry of claims presented for audit. The claim when presented for audit should be accompanied by a copy of the order previously issued, which furnishes the comptroller with the information required to cancel the reserve previously established. This is done by the entry of the amount of the order in a column provided for that purpose, the total of which is posted periodically to the controlling account in the General Ledger and the details are posted to a subsidiary record.

This book also contains a column for the claims audited, the total of which is posted to a controlling account in the General Ledger and the details are posted to a subsidiary record.

29. Warrants Payable Register.—After claims are audited, accounts are drawn on the treasurer or disbursing officer by the comptroller and entered in a Warrants Payable Register, the totals of which are posted to the audit side of an account in the general ledger called Warrants Payable and to the credit side of cash.

THE ACCOUNTS

30. General Ledger Accounts.—In the General Ledger the accounts are segregated into four groups as follows:

Current	Capital
Assessment	Trust

By this method the accounts dealing with the same class of transactions are grouped in the General Ledger, which is physically subdivided by colored sheets or tabs bearing the name of the group. The groups in effect comprise separate and distinct

ledgers, although they are within the same volume and are self-balancing. The value of such a separation will be obvious when it is pointed out that funds applicable to one of the four purposes named may not be applied to any one or more of the other purposes.

31. The accounts in the **current group** contain the record of the current operations of the city. These accounts are closed periodically into a Current Surplus account which indicates the result of the financial plan adopted at the beginning of the fiscal period. If current revenues exceed current expenses a surplus will result. On the other hand, if the expenses exceed the revenues a deficiency will follow.

32. The accounts in the **assessment group** record the transactions in connection with city improvements that are financed by means of special assessments levied against groups of property owners. These accounts, if all assessments have been paid during the fiscal year, will show neither a surplus nor a deficiency.

33. The accounts in the **capital group** record the transactions in connection with city improvements made at the expense of the city at large and which are financed by the issue of bonds, or by appropriations.

City properties, at their appraised or assessed values, are included in this group and represent assets of the city, which, when set up against the bonded debt (liabilities) show the capital surplus.

34. The accounts in the **trust group** record the receipt and disbursement of funds in which the municipality acquires no proprietary interest and acts only as agent or trustee.

35. Subsidiary Records.—As already defined, a **controlling** account is one that shows in summary form the items which appear in detail in other accounts. The other accounts, which show the details are called **subsidiary** accounts. In this Section, the controlling accounts are indicated by means of an asterisk (*) preceding the title; for example,

*Current Revenues.

For subsidiary records two or more books should be used. Because of the large number of items relating to expenditures for which appropriations may be made, one subsidiary ledger is used to record such expenditures and is called the *Appropriation Ledger,* or *Ledger A.* All other subsidiary items may be recorded in a single volume, known or denominated as *Ledger B.*

For the purposes of Ledger B, any ordinary form of commercial ledger may be used. Ledger A requires special ruling of the form shown in Fig. 3.

CURRENT ACCOUNTS

36. The current accounts in the General Ledger are as follows:

Debits	Credits
Current Cash	Current Claims Audited
Taxes Receivable—Current	Current Warrants Payable
Taxes Receivable—County	Current Loans
Tax Sale	Due to Other Accounts
Taxes Receivable—Arrears	Due to County Treasurer
Due From Other Accounts	Reserve for Current Obligations
Sinking Fund Contribution Required	Current Revenues—Estimated
Estimated Revenues	Current Revenues—Unestimated
	Current Appropriations
	Current Surplus

Explanations for the use of these accounts follow and illustrative entries are given for transactions of frequent occurrence.

ENTRIES RECORDING THE BUDGET

37. At the beginning of a fiscal year the books of a city disclosed a current surplus of $5,000. The Board of Estimate and Apportionment prepared and the Common Council adopted a budget with appropriations amounting to $425,000, estimated revenues in the sum of $10,000, sinking fund contributions to meet maturing instalments on the bonded debt provided for in the budget in the sum of $10,000, and after applying the current surplus on reduction thereof, a tax levy of $400,000.

This information is transmitted to the comptroller by the city clerk, who delivers to the comptroller a copy of the budget adopted by the Common Council.

Thereupon, the comptroller makes the following entry in his Journal:

Current Surplus	$ 5,000	
Estimated Revenues	10,000	
Sinking Fund contribution required	10,000	
Taxes Receivable—current	400,000	
To *Current Appropriations		$425,000

38. Comments on the Foregoing Entries.—Current Surplus in the General Ledger will be debited when the item is posted. It is assumed that at the date of this entry the ledger account, Current Surplus, shows a credit balance which will be offset by this debit entry. During the year this account will be debited with charges or payments on account of expenses of prior years, unless a reserve or some other provision has been made to meet such charges and payments. At the end of the fiscal year there will be transferred to this account the amounts of the debit balances in the accounts called *Estimated Revenues* and *Appropriated Revenues.*

During the year Current Surplus will be credited with the amounts of reserves cancelled which exceed the reserves set up. At the end of the fiscal year there will be transferred to Current Surplus the credit balances in the accounts known as *Current Revenues—Estimated, Current Revenues—Unestimated,* and the credit balance in the account known as *Current Appropriations,* which balance represents unencumbered balances of all current appropriation accounts.

At the close of the fiscal year and when the entries described have been made, the account will show either a debit or credit balance. A debit balance means a current deficit, or, in other words, that expenses have exceeded revenues. A credit balance means a current surplus, or an excess of revenues over expenses.

Where a deficit appears, the amount thereof is carried forward and included in the succeeding tax levy. The amount of a surplus, if such be shown, is carried forward and applied in whole or in part to the reduction of the tax levy.

39. Estimated Revenues in the General Ledger is debited with amount of revenues which the appropriating board has estimated will be received during the current year and which has been applied in reduction of the tax levy. If during the year revenues in excess of the amounts estimated are derived from estimated sources and are applied or transferred to the credit of appropriations or other accounts, they are debited to Estimated Revenues. At the end of the year this account will be closed by a credit entry, the amount of which will at the same time be debited to Current Surplus.

During the year and until the books are balanced, the Estimated Revenues account will show a debit balance, which, when contrasted with the credit balance in the account called *Current Revenues—Estimated,* indicates either the amount of anticipated revenues which must accrue or be received in order to meet the requirements of the budget and subsequent appropriations from such revenues, or an excess of current revenues from estimated sources over the amounts anticipated and appropriated.

Care should be taken to avoid confusion between the titles of the ledger accounts, Estimated Revenues, and Current Revenues—Estimated. The title *Estimated Revenues,* as has been explained, refers to the revenues which the appropriating board has estimated will be received during the fiscal year and the amount of which as estimated has been applied to reduce the tax levy.

The term *Current Revenues—Estimated* refers to revenues of the same character as those included in Estimated Revenues, but which have actually accrued or been collected.

Current Revenues—Unestimated means revenues collected or accrued, which were not considered when the budget was prepared.

The account Estimated Revenues will not be required in those cities whose charters do not permit the making of appropriations based on estimated revenues as well as on taxes.

40. The account known as **Sinking Fund Contribution Required** is charged (debited) with the amount esti-

mated in the budget as the contribution of the sinking funds to meet maturities of bonded debt provided for in the budget.

The same account will be credited when payments are made from sinking funds to the current accounts to meet the estimated requirements.

A debit balance, if any, indicates the amount of contributions from sinking funds remaining unpaid.

41. The account known as **Taxes Receivable** will be debited with the amount of the tax levy and with such additional items as may be charged against taxpayers and collected with the taxes.

This account will also be debited with the amounts refunded on account of erroneous or excessive payments, not including, however, such refunds as may be made only after authorization by the proper board and appropriation therefor.

From time to time this account will be credited with the amounts collected on account of current taxes, with amounts cancelled, and with amounts transferred to Tax Sale account.

A debit balance remaining in this account indicates the amount of uncollected taxes and should correspond with the amount of unpaid taxes on the current tax roll.

42. **Current Appropriations** is a controlling account and should be supported by items in a subsidiary ledger, known as the *Appropriation Ledger* or *Ledger A.*

In the General Ledger, Current Appropriations is credited with the total of the appropriations in the budget, and from time to time with such transfers or additional appropriations as may be made under authority of the appropriating board, and with refunds of erroneous payments.

Certain debits and credits in this account in connection with the issue of orders effecting commitments or charges against appropriations, the cancellation of such items, and the audit of claims will be more fully explained further on in Art. **51.**

At the close of the fiscal year Current Appropriations account will ordinarily show a credit balance, which represents the unencumbered balance of appropriations and will be closed into Current Surplus.

The balance in Current Appropriations account should correspond with the aggregate of the balances in the Appropriation Ledger.

ENTRIES RECORDING SUNDRY RECEIPTS

43. From time to time the treasurer receives cash from sundry sources and reports the same daily to the comptroller.

The comptroller records the receipts in a Cash Book properly ruled to develop totals of the several classes of collections. The details are posted item by item to proper accounts in the subsidiary ledger (Ledger B) and the totals are posted periodically to the controlling account.

The following entries illustrate the method of recording receipts from taxes, estimated revenues, unestimated revenues, sinking fund contributions, and the proceeds of temporary loans issued in anticipation of taxes:

Current Cash	$300,000.00	
To Taxes Receivable		$300,000.00
Current Cash	10,000.00	
To Sinking Fund Contribution Required		10,000.00
Current Cash	8,000.00	
To *Current Revenues—Estimated		8,000.00
Current Cash	3,000.00	
To *Current Revenues—Unestimated		3,000.00
Current Cash	50,000.00	
To Current Loans		50,000.00

44. Comments on the Foregoing Entries.—It is elementary that cash account is debited when cash is received and credited when cash is paid. In the current group the cash account is called Current Cash and is so segregated to prevent expenditure of the cash for other than current purposes.

45. The accounts known as Taxes Receivable and Sinking Fund Contribution Required have been described in Arts. **40** and **41.**

The entries illustrated mean that taxes of the current year to the amount of $300,000.00 have been collected and the sum

required of the sinking funds has been transferred from Sinking Fund accounts to the current group.

46. The account known as Current Revenues—Estimated is credited with receipts of revenues from sources estimated in the budget.

The same account will be debited with the amount of items refunded and which had been previously credited.

At the close of the fiscal year a credit balance will be closed into Current Surplus.

47. The account known as Current Revenues—Estimated is substantially the same as the account Current Revenues—Unestimated. The distinction between Current Revenues—Estimated and Current Revenues—Unestimated is explained in Art. **39.**

48. The account known as Current Loans is credited when temporary loans in anticipation of taxes are issued.

The same account is debited when the loans are paid.

A credit balance indicates the amount of temporary loans outstanding.

ENTRIES AFFECTING APPROPRIATIONS

49. When orders for materials or supplies are presented to the comptroller for his approval they are entered in an order register. Details are posted item by item to the proper accounts in the Appropriation Ledger, a column being provided on each page for that purpose. Totals are posted periodically to accounts in the General Ledger by means of the following form of entry.

*Current Appropriations	$100,000.00	
To *Reserve for Current Obligations		$100,000.00

Claims of the current year presented to the comptroller for audit have annexed copies of the orders previously approved by the comptroller. The claims are entered in a Claim Register, of the form shown in Fig. 2, having columns in which to enter the amount of the claim and the amount of the order cancelled.

50. In each instance details are posted to columns provided in the pages of the Appropriation Ledger and the totals are posted periodically to accounts in the General Ledger by means of entries as follows:

*Reserve for Current Obligations	$ 90,000.00	
To *Current Appropriations		$ 90,000.00
*Current Appropriations	400,000.00	
To Current Claims Audited		400,000.00

51. Comments on the Foregoing Entries. — In Art. **42** the account called Current Appropriations is described, leaving for consideration here the phases of that account and of the account called Reserve for Current Obligations indicated by the foregoing entries.

The account called Current Appropriations is intended to show at all times the limit of the city's spending power for current purposes. That limit stands at the total of appropriations, or, as sometimes called, authorizations, when the budget is adopted. The limit is reduced when an order is issued and approved by the comptroller. Orders are presented to the comptroller for his certification to the effect that an unencumbered balance remains in the account, a fact he ascertains by reference to the account in the subsidiary ledger. The orders are made by the department in triplicate, one copy remaining in the department files, one being left with the comptroller, and the third being delivered to the party to whom it is directed, for annexing to the claim.

The orders left with the comptroller are entered in an Order Register ruled to produce totals for posting periodically to the controlling accounts called Reserve for Current Obligations and Current Appropriations, the details of the reserve being posted by items to proper columns in the Appropriation Ledger. The journal entry for totals is the one shown in Art. **49.**

When the order is returned annexed to the claim, the reserve is cancelled and the appropriation restored by reversing the entry as shown in Art. **50.** The information upon which this entry is based is taken from the Claim Register. The Claim Register is ruled to produce totals for posting periodically to

the controlling accounts, the details of cancellations being posted by items to the proper column in the Appropriation Ledger.

Coincidentally, the total of the column in the Claim Register showing claims audited is posted to the controlling account (Current Appropriations), the details being posted to the proper column in the Appropriation Ledger and the same amount credited to an account in the General Ledger called Current Claims Audited.

The total of current claims audited will usually exceed the total of orders reserved and cancelled, for the reason that current claims audited include salaries, payrolls, bonds, interest, and other items for which no orders have been issued.

A credit balance in the account called Reserve for Current Obligations shows the amount reserved for the payment of claims not yet presented for audit, and at the close of the fiscal year will be carried forward.

52. The account called Current Claims Audited is credited with the totals of claims audited and debited with the totals of warrants drawn in payment. A credit balance indicates the amount of claims audited for which warrants have not yet been drawn, and at the close of the fiscal year will be carried forward.

53. If during the year the appropriations are increased by resolution of the appropriating body, the record is entered in the comptroller's books by an entry as follows:

*Estimated Revenues	$1,000.00	
To *Current Appropriations		$1,000.00

ENTRIES RECORDING PAYMENTS

54. Claims that are based on orders issued, salaries, payrolls, maturing instalments of the bonded debt, interest on the bonded debt, and all other items chargeable to appropriations, are paid by means of warrants, and are charged to the account called Current Claims Audited and credited to an account called Current Warrants Payable as follows:

Current Claims Audited	$400,000.00	
To Current Warrants Payable		$400,000.00

When the warrants are presented to the city treasurer and are paid and the fact reported to the comptroller, an entry is made as follows:

Current Warrants Payable	$300,000.00	
To Current Cash		$300,000.00

55. No provision is made in the budget for the payment of loans issued in anticipation of taxes. Such loans are paid from the taxes collected and payment is recorded in the comptroller's books by entries as follows:

Current Loans	$50,000.00	
To Current Claims Audited		$50,000.00
Current Claims Audited	50,000.00	
To Current Cash		50,000.00
or		
Current Loans	50,000.00	
To Current Cash		50,000.00

56. If from time to time it be found necessary to make corrections, in the nature of refunds on account of erroneous payments, the account benefited by the error is debited and Current Claims Audited is credited in the following manner:

Taxes Receivable	$1,000.00	
To Current Claims Audited		$1,000.00
or		
*Current Revenues—Estimated	1,000.00	
To Current Claims Audited		1,000.00
or		
*Current Revenues—Unestimated	1,000.00	
To Current Claims Audited		1,000.00

57. Comments on the Foregoing Entries.—The account called Current Claims Audited has been described in Arts. **52** and **54**.

The account called Current Warrants Payable is credited with the amount of audited claims for which warrants or drafts on the treasurer are drawn, and is debited when the warrants are paid. A credit balance indicates the amount of

warrants outstanding, and at the close of the fiscal year should be carried forward.

The use of the accounts for claims audited and for warrants payable depends on the financial provisions of the charter and on the procedure in each city. To illustrate: In one city, the chamberlain does not receive any claims for audit, as he has not the power of audit. Warrants are drawn on him for payment. He therefore does not require a claims-audited account, as the warrants are credited directly to one of the warrants-payable accounts, and at the same time the entry is made for the cancellation of the reserve, if any, for orders or contracts liquidated.

In another city, the commissioner of finance has both the power of audit and payment, claims being paid after audit without the use of any warrants. Here, all claims may be credited to a claims-audited account and, when paid, are credited directly to cash.

In a different city, neither of these accounts will be required, as the chamberlain pays all warrants drawn on him as he receives them from the city clerk, therefore making his credits directly to cash.

In still another city, both these accounts may be used. The comptroller of that city receives and audits claims and draws warrants on the treasurer for their payment. Claims should first be credited to a claims-audited account and then pass to warrants-payable and then to cash.

ENTRIES ILLUSTRATING TREATMENT OF UNCOLLECTED TAXES

58. It has been shown in Art. **41** that when the amount of taxes collectible in a fiscal year is determined, the account called Taxes Receivable is debited. This account represents an asset of the city which from time to time is converted into cash to the extent of collections. The balance in the account is reduced by the amount of collections entered as follows:

Current Cash
    To Taxes Receivable

59. At some date in the fiscal year, fixed by the charter, the treasurer determines the amount unpaid on account of current taxes, prepares a list of parcels of the real estate burdened with the unpaid items, and closes the account called Taxes Receivable into a Tax Sale account by means of the following:

Tax Sale (year)
    To Taxes Receivable

60. If charter provisions permit other items chargeable against individuals, such as unpaid water rents and special assessments, to be included in the tax sale, the entry takes the following form:

Tax Sale (year)
    To Taxes Receivable
        Water Rents Receivable
        Due to Assessment Accounts

61. In the interval between the preparation of the tax-sale list and the closing of Taxes Receivable, delinquents may pay the treasurer, who records the same as follows:

Current Cash
    To Tax Sale (year)

On the day of sale, tax-sale certificates are purchased by the public and the items remaining unsold continue an asset of the city to be subsequently redeemed by delinquents.

The following entry closes the tax-sale accounts:

Current Cash
*Taxes Receivable—Arrears
    To Tax Sale (year)

62. Comments on the Foregoing Entries.—The accounts called Current Cash and Taxes Receivable have already been described.

The account called Tax Sale (year) is debited with the amount remaining unpaid on account of current taxes and, where authorized by the charter, with unpaid water rents and unpaid assessments; it will be credited with the payments by delinquents before the sale, and upon the day of sale or immediately thereafter it will be credited with the amount of sales

to individuals and the amount charged against parcels for which there are no bidders or which are sold to the city. This account is thereupon balanced. The city's interest in unpaid taxes is shown in the account called Taxes Receivable—Arrears.

63. The account called Taxes Receivable—Arrears is debited with the amount of taxes, water rents, and assessments, not sold to individuals or purchased by the city. It will be credited from time to time as items included therein are paid or cancelled by court order or by resolution of the Common Council.

The debit balance shows the amount of delinquent taxes owned by the city and at the close of the fiscal year will be carried forward.

Taxes Receivable—Arrears is a controlling account and should be supported by a subsidiary ledger, containing an account with the arrears of taxes of each year. The balance of this account should correspond to the aggregate of the balances of the subsidiary accounts. Periodical proof of this should be made.

64. The account called Due to Assessment Accounts may sometimes be known as Due to some other accounts, the specific account being named, as, for example, Due to Capital Account. The account is intended to show the transfers to the current group, of items from one or more of the other groups. The entry in Art. **60** illustrates a transfer of unpaid assessments from the assessment group to the current group, the transfer being made for the purpose of bringing them all together in the Tax Sale account.

The Due to Assessment Accounts is credited with the amount of assets transferred from one or more of the other groups to an account in the current group when the amount is not at the same time offset by a transfer of cash. It is debited with payments due to accounts in one or more of the other groups.

The balance debit or credit shows the amount due to or from accounts in other groups, and at the close of the fiscal year is carried forward.

A similar account is sometimes required called "Due *from* other accounts," which records transfers *from* an account in the current group *to* accounts in one or more of the other groups. The entries are the same as those last described. It should be remembered, however, that one account shows the transfer *to* the current group, while the other shows the transfers *from* the current group.

65. Trial Balance. — A Trial Balance of Current Accounts is prepared in the form shown herewith.

TRIAL BALANCE—CURRENT ACCOUNTS

	Total of Entries		Balances	
	Debits	Credits	Debits	Credits
Current Surplus.	$ 5,000.00		$ 5,000.00	
Estimated Revenues.........	11,000.00		11,000.00	
Sinking Fund Contributions Required.....	10,000.00	$ 10,000.00		
Taxes Receivable—Current	401,000.00	300,000.00	101,000.00	
Current Appropriations......	500,000.00	516,000.00		$ 16,000.00
Current Cash....	371,000.00	350,000.00	21,000.00	
Current Revenues—Estimated........		8,000.00		8,000.00
Current Revenues—Unestimated.........		3,000.00		3,000.00
Current Loans...	50,000.00	50,000.00		
Reserve for Current Obligations..........	90,000.00	100,000.00		10,000.00
Current Claims Audited.......	450,000.00	451,000.00		1,000.00
Current Warrants Payable.	300,000.00	400,000.00		100,000.00
Totals......	$2,188,000.00	$2,188,000.00	$138,000.00	$138,000.00

ACCOUNTS RECORDING TRANSACTIONS OF WATER DEPARTMENT

66. In cities owning and operating a system of waterworks the management usually devolves on the commissioner of public works or may be committed to a Board of Water Commissioners. The department should be self-sustaining; and, except to recoup losses or to pay the city's share of the cost of water devoted to public use, such as street cleaning, sprinkling, etc., no part of the revenue of the water department is derived from taxes.

The water accounts are a subdivision of the current group, in independent balance, and with a separate cash account. The following General Ledger accounts should be used:

DEBITS	CREDITS
Water Department Cash	Water Revenues
Water Rents Receivable	Reserve for Water Department Obligations
Water Department Expenses	Water Department Fund

67. Entries Recording the Transactions of the Water Rent Roll.—Upon the completion of the Water Rent Roll and delivery to the treasurer for collection, the total is certified to the comptroller, who thereupon records the same with entries as follows:

*Water Rents Receivable	$100,000.00	
To Water Revenues		$100,000.00

68. Water rents and other items collected are debited to Water Department Cash and credited to Water Rents Receivable or in the case of other items, such as interest and penalties on water rents, charges for miscellaneous services, sales of materials, etc., are credited to Water Revenues in the following manner:

Water Department Cash	$75,000.00	
To *Water Rents Receivable		$75,000.00
Water Department Cash	1,000.00	
To Water Revenues		1,000.00

If water charges be cancelled and refunded or water rents be refunded, the transactions are recorded as in the following entries:

Water Revenues	$100.00	
*Water Rents Receivable	150.00	
To Water Department Cash		$250.00

69. If charter provisions require certifications by the comptroller of orders issued by the department to vendors, the entries are as follows:

Water Department Expenses	$20,000.00	
To Reserve for Water Department Obligations		$20,000.00

Upon presentation to comptroller of the claim for audit accompanied by the copy of the order, the reserve is cancelled by reversing the entry last above as follows:

Reverse for Water Department Obligations	$15,000.00	
To Water Department Expenses		$15,000.00

Payment of claims against the Water Department is recorded as in the following entry:

Water Department Expenses	$25,000.00	
To Water Department Cash		$25,000.00

70. At the close of the fiscal period the debit balance of the account called Water Department Expenses is charged to an account called Water Department Fund, and the same account is credited with the credit balance of the account called Water Department Revenues in the following manner:

Water Department Fund	$ 30,000.00	
To *Water Department Expenses		$ 30,000.00
Water Revenues	100,900.00	
To Water Department Fund		100,900.00

The entries last described will close the revenue accounts (rents and other revenues) and bring together the revenues and expenses so as to show the profit or loss during the fiscal period.

If the charter makes water rents a lien on the property of the consumer and provides for the sale of the property as in the

case of delinquent taxes, the debit balance in the account Water Rents Receivable is transferred to the Tax Sale account by an entry as follows:

Tax Sale (year)	$25,000.00	
To *Water Rents Receivable		$25,000.00

71. Comments on the Foregoing Entries.—The account called Water Rents Receivable corresponds to the account called Taxes Receivable, except that one refers to water rents and the other to taxes, and is developed according to the same rules. At the close of the fiscal year the debit balance shows the amount of water rents uncollected.

Water Rents Receivable is a controlling account and its balance should correspond with the aggregate of the unpaid items on the Water Rent Roll.

72. The account called Water Revenues is credited with water rents charged to consumers as shown by the Water Rent Roll and with the receipt of other water revenues. It is debited with amounts refunded on account of water revenues, other than water rents which are debited to Water Rents Receivable.

At the close of the fiscal year the Water Revenues account shows the net amount of Water Department revenues and is closed into Water Department Fund.

73. The accounts called Water Department Cash, Water Department Expenses, and Reserve for Water Department Obligations, correspond to similar accounts recording current transactions, as already described, and which are called Current Cash, Current Appropriations, and Reserve for Current Obligations, and are developed along similar lines.

74. The account called Water Department Fund is intended to reflect concisely the operations of the department for a fiscal period, and will disclose either a surplus or a deficit. At the close of the fiscal year this account is debited with the amount of the debit balance in the account called Water Department Expenses and is credited with the amount of the credit balance in the account called Water Revenues. A credit bal-

ance in the Water Department Fund shows a surplus of the Water Department and a debit balance reflects a deficiency.

75. Trial Balance.—A Trial Balance of the accounts of the Water Department is shown herewith.

TRIAL BALANCE—WATER ACCOUNTS

	Total of Entries		Balances	
	Debits	Credits	Debits	Credits
Water Rents Receivable	$100,150.00	$100,000.00	$ 150.00	
Water Revenues	101,000.00	101,000.00		
Water Department Cash	76,000.00	25,250.00	50,750.00	
Water Department Expenses	45,000.00	45,000.00		
Reserve for Water Department Obligations	15,000.00	20,000.00		$ 5,000.00
Water Department Fund	30,000.00	100,900.00		70,900.00
Tax Sales	25,000.00		25,000.00	
Totals	$392,150.00	$392,150.00	$75,900.00	$75,900.00

ENTRIES DEALING WITH THE COLLECTION AND RETURN OF STATE AND COUNTY TAXES

76. In some cities the treasurer is the collector of state and county taxes levied by a county board and for the payment of which no provision is made in the city budget. Upon certification to the city authorities of the amount required, the information is entered upon the comptroller's books by an entry as follows:

Taxes Receivable—County	$50,000.00	
To Due County Treasurer		$50,000.00

Collections of state and county taxes reported to the comptroller by the city treasurer are recorded as follows:

Current Cash	$40,000.00	
To Taxes Receivable—County		$40,000.00

Payments made to the county treasurer are recorded as follows:

Due County Treasurer	$40,000.00	
To Current Cash		$40,000.00

After the expiration of a period named in the charter, many cities are required to return to the county treasurer a list of unpaid state and county taxes, whereupon the city is discharged from further liability, and subsequent proceedings are conducted by the county officers.

Upon making the return to the county treasurer the transaction is recorded by an entry as follows:

Due County Treasurer	$10,000.00	
To Taxes Receivable—County		$10,000.00

77. Comments on the Foregoing Entries.—The account called Taxes Receivable—County is similar to the account known as Taxes Receivable previously described, except that it records the receipt and disbursement of taxes belonging to the state and county and not to the city.

This account is debited with the total of the county tax roll and with refunds of erroneous or excessive payments, and is credited with county taxes collected and with the amount of unpaid taxes returned to the county treasurer.

Until balanced by the return to the county treasurer, the debit balance in this account shows the amount of uncollected state and county taxes.

78. The account called Due to County Treasurer is credited with the amount of state and county taxes debited to Taxes Receivable—County. It is debited with payments to the county treasurer on account of state and county taxes, with the amount of state and county taxes cancelled, and with the amount returned to the county treasurer as unpaid. Unless and until balanced by return to county treasurer, the account shows the amount due the county treasurer corresponding to the balance in the account called Taxes Receivable—County.

If instead of returning the unpaid county taxes to the county treasurer, the city assumes them and pays the county treasurer

the amount of the tax warrant in full, this entry will be credited to Current Cash. The asset of Taxes Receivable—County will then be the property of the city without any offsetting liability, and the account will be developed as are other tax receivable accounts, depending on the tax procedure of the city.

ASSESSMENT ACCOUNTS

79. Assessment accounts are those which record the transactions of the city that relate to assessment work and the levy and collection of assessments, including the financing of the cost of the work and of uncollected assessments.

An **assessment** is defined as the adjustment of the shares of a group of contributors toward a common beneficial object according to the benefits received.

The charters of municipalities outline various plans for authorizing, making, and financing assessable improvements. Notwithstanding the variation of details, it will be found that the general principles of this group of accounts may be made applicable with such variations as local conditions require.

As in the case of the accounts in the other groups, the controlling accounts, where required, are in the General Ledger, with subsidiary records in the ledger referred to as Ledger B in connection with the current group of accounts.

80. Entries in Assessment Accounts.—Charters of some municipalities provide for the authorization of assessable work without any definite statement of the cost or any appropriation therefor. The work is completed, and the cost definitely ascertained before an assessment is levied. In the levy of the assessment there is added to the direct cost a percentage for engineering expenses, which include the salaries and miscellaneous expenses of the engineering force of the municipality paid out of current appropriations. The cost of assessment work is met out of the proceeds of temporary loans, or assessment bonds, which are paid when the assessments are collected.

The following is a list of the accounts in the assessment group:

Debits	Credits
Assessment Cash	Assessment Loans
Local Improvements Assessable	Reserve for Assessment Obligations
Assessments Receivable	Assessment Claims Audited
Assessments Against City	Assessment Warrants Payable
Due From Current Accounts	Due to Current Accounts
Assessment Interest on Loans	Assessment Revenues
	Assessment Surplus

The following entries exhibit the development of the assessment accounts.

ENTRY RECORDING CONTRACTS ENTERED INTO OR ORDERS ISSUED

81. When contracts are entered into or orders are issued, entries are made as follows:

Local Improvements Assessable	$20,000.00	
To Reserve for Assessment Obligations		$20,000.00

82. Comments on the Foregoing Entries.—The account known as Local Improvements Assessable is debited with all advances made and expenses or liabilities incurred on account of a project the final cost of which is to be the subject of an assessment, wholly or in part, against the property benefited. This account is credited with all orders and contracts cancelled or liquidated on the audit of claims, with refunds of erroneous payments, and with assessments levied. The debit balance shows the amount of advances, expenses, and obligations incurred on account of assessable work. This is a controlling account and should be supported by a subsidiary ledger containing an account with each improvement. Proof of the subsidiary record should be made monthly. In making the final credit entry, representing the levy of the assessment, the fiscal officer should see that the amount thereof corresponds precisely with the cost of the work, as shown by the account in the subsidiary ledger. Any discrepancy should be adjusted.

83. The account called Reserve for Assessment Obligations is debited with the reserves to be cancelled on the liquidation of orders or contracts when claims are audited for local improvements or assessable work in progress, and with orders

and contracts cancelled. It is credited with the amount reserved on account of the contingent obligation and commitments represented by orders and contracts. The credit balance of the account shows the amount of outstanding orders and contracts relating to assessable work.

ENTRIES RECORDING CLAIMS AUDITED FOR PAYMENT

84. An entry in the following form is made for amount reserved on the order or contract:

Reserve for Assessment Obligations	$20,000.00	
To *Local Improvements Assessable		$20,000.00

For amount of claims audited, the entry is as follows:

*Local Improvements Assessable	$22,000.00	
To Assessment Claims Audited		$22,000.00

85. Comments on the Foregoing Entries.—The accounts called Reserve for Assessment Obligations and Local Improvements Assessable are described in the preceding articles.

The account called Assessment Claims Audited is debited with warrants drawn in payment of audited claims and credited with the amount of claims audited which are chargeable to any account in the assessment group. The credit balance shows the amount of claims audited which remain unpaid.

The remarks in Arts. **28** and **29** concerning claims audited and warrants payable apply also to assessment claims.

ENTRIES ON THE LEVY OF AN ASSESSMENT

86. In connection with the levy of an assessment, entries are made as follows:

*Assessments Receivable	$16,000.00	
Assessments Against the City	8,000.00	
To *Local Improvements Assessable		$22,000.00
Due to Current Accounts		2,000.00

87. Comments on the Foregoing Entries.—The accounts Assessments Receivable and Assessments Against the City are debited with the amount of assessments levied and

with the amount of refunds of erroneous or excessive payments. The accounts are credited with assessments collected, cancelled, or reduced, and with assessments transferred to tax roll or Tax Sale account. The debit balance shows the amount of uncollected assessments.

The account Assessments Receivable is a controlling account and should be supported by a subsidiary record containing accounts with each individual assessment. The aggregate of the balances of the accounts in the subsidiary ledger should correspond with the balance of the controlling account, and proof of this fact should be made monthly. The balance of each subsidiary Assessments Receivable account should, in turn, agree with the aggregate of the open and unpaid items on the assessment roll. This, too, should be proved periodically.

88. The account called Due to Current Accounts is debited with payments to current accounts on liquidation of sums due to that group of accounts. It is credited with cash received from current accounts to finance assessable work, with advances for assessable work made out of current accounts, and with engineering charges met out of current accounts included in an assessment levy. The credit balance shows the amount due to the current accounts.

A collateral entry in the current accounts will be required as follows:

Due from Assessment Accounts	$2,000.00	
To Current Revenues—Unestimated		$2,000.00
or		
Current Revenues—Estimated		

ENTRIES FOR ASSESSMENTS COLLECTED

89. When assessments are collected, entries are made as follows:

Assessment Cash	$6,500.00	
To *Assessments Receivable		$6,000.00
Assessment Revenues		500.00
(For interest and penalties)		

90. Comments on the Foregoing Entries.—In the assessment group, the cash account is called Assessment Cash

and is so segregated to prevent its expenditure for other than assessment purposes.

The account called Assessments Receivable is described in Art. **87.**

The account called Assessment Revenues is debited with assessment revenues refunded and credited with revenues which are applied to assessment purposes. The credit balance reflects the net revenues accrued or received, and, at the end of the year, should be closed into Assessment Surplus account. The particular revenues which are to go to this account depend on the financial plan in each city. In some cities all interest and penalties on assessments are taken into the current revenues, in which case there will be no account for assessment revenues. In others, these earnings are used to offset the interest on assessment loans for which no provision is made in the budget. In that case, this account will be necessary.

At the end of the year the balance of the Assessment Revenues account, together with that of the Assessment Interest on Loans account should be closed into the Assessment Surplus account, thus indicating whether these revenues were, in fact, sufficient to meet the interest on loans.

ENTRIES FOR MONEY BORROWED IN ANTICIPATION OF THE COLLECTION OF ASSESSMENTS OR TO PROVIDE A FUND FOR ASSESSABLE WORK IN PROGRESS

91. When money is borrowed in anticipation of the collection of assessments or to provide funds for assessable work in progress, entries are made as follows:

Assessment Cash	$10,000.00	
To Assessment Loans		$10,000.00

92. Comments on the Foregoing Entries.—The account called Assessment Cash is described in Art. **90.**

The account called Assessment Loans is debited with assessment loans paid, and credited with moneys borrowed in anticipation of the collection of assessments, and for loans to finance assessable work, which are to be paid from the collection of assessments to be levied.

The credit balance shows the amount of unpaid loans. This account is intended only for those loans which are made to finance assessment work or uncollected assessments. So-called assessment bonds, or local improvement bonds, which are issued for the city's share of assessments and which are to be redeemed wholly by subsequent taxation should go in the account for Capital Loans and not here.

ENTRIES TO RECORD PAYMENT BY CITY OF ITS SHARE OF AN ASSESSMENT

93. The record of the payment of the city's share of an assessment is made as follows:

Assessment Cash	$8,000.00	
To Assessments Against City		$8,000.00

94. Comment on the Foregoing Entries. — The account called Assessment Cash is described in Art. **90.**

The account called Assessments Against City is described in Art. **87.**

ENTRIES FOR ASSESSMENT LOANS TO BE PAID

95. Assessment loans to be paid are entered in the following manner:

Assessment Loans	$5,000.00	
To Assessment Claims Audited		$5,000.00

96. Comment on the Foregoing Entries. — The account called Assessment Loans is described in Art. **92.**

The account called Assessment Claims Audited is described in Art. **85.**

ENTRIES FOR INTEREST ON ASSESSMENT LOANS TO BE PAID

97. The interest on Assessment Loans requires entries as follows:

Assessment Interest on Loans	$150.00	
To Assessment Claims Audited		$150.00

98. Comments on the Foregoing Entries.—The account called Assessment Interest on Loans is debited with interest paid on assessment loans in municipalities that do not

make provisions therefor in the annual budget and is credited at the end of the year by transferring the debit balance to Assessment Surplus account. Assessment Interest on Loans account is not required in cities that make provisions for interest on these loans in the annual budget. The procedure in such case has been explained in Art. **90.**

The account called Assessment Claims Audited is described in Art. **85.**

ENTRIES FOR PAYMENT TO CURRENT ACCOUNTS

99. Payment to current accounts requires entries as follows:

Due to Current Accounts	$2,000.00	
To Assessment Claims Audited		$2,000.00

A collateral entry in current accounts will be required, as follows:

Current Cash
  To Due from Assessment Accounts

100. Comment on the Foregoing Entries.—The account called Due to Current Accounts is described in Art. **88.**

The account called Assessment Claims Audited is described in Art. **85.**

ENTRIES FOR WARRANTS ISSUED IN PAYMENT OF CLAIMS

101. When warrants are issued in payment of claims, the following entries are required:

Assessment Claims Audited	$20,000.00	
To Assessment Warrants Payable		$20,000.00

102. Comment on the Foregoing Entries.—Assessment Claims Audited account is described in Art. **85.**

The account called Assessment Warrants Payable is debited with the payments of assessment warrants and credited with assessment warrants issued; that is, with all warrants which are chargeable to any account in the assessment accounts group. A credit balance shows the amount of unpaid warrants. (See also Arts. **28** and **29** concerning claims audited and warrants payable accounts.)

ENTRIES TO RECORD PAYMENT OF WARRANTS

103. The payment of warrants requires entries as follows:

Assessment Warrants Payable	$18,000.00	
To Assessment Cash		$18,000.00

104. Comment on the Foregoing Entries. — The account called Assessment Warrants Payable is described in Art. **102.**

The account called Assessment Cash is described in Art. **90.**

ENTRIES FOR UNCOLLECTED ASSESSMENTS

105. In municipalities where sales are authorized for assessment arrears, uncollected assessments, including penalties, are transferred to a Tax Sale account by entries as follows: (See Arts. **60** and **62** in current accounts.)

Due from Current Accounts	$10,500.00	
To *Assessments Receivable		$10,000.00
Assessment Revenues		500.00
(For interest and penalties)		
Assessment Surplus	150.00	
To Assessment Interest on Loans		150.00

106. Comment on the Foregoing Entries. — The account called Due from Current Accounts is debited with unpaid assessments transferred to Tax Sale account and credited with receipts from current accounts to liquidate charges against that group of accounts. A debit balance shows the amount due from current accounts.

The account called Assessments Receivable is described in Art. **87.**

The account called Assessment Revenues is described in Art. **90.**

The account called Assessment Surplus (or deficit) is debited with surplus transferred to current accounts; and at the end of the year it is debited with the debit balance of Assessment Interest on Loans account. It is credited with appropriations in the budget to apply on the deficit; and at the end of

year it is credited with the credit balance of Assessment Revenues account. A debit balance reflects a deficit; a credit balance reflects a surplus in the assessment group of accounts.

CLOSING ENTRIES AT END OF YEAR

107. At the end of the year the assessment accounts are closed as follows:

*Assessment Revenue	$1,000.00	
To Assessment Surplus		$1,000.00

The following is a trial balance of the assessment accounts after the above entries are made:

TRIAL BALANCE—ASSESSMENT ACCOUNTS

	Totals of Entries		Balances	
	Debits	Credits	Debits	Credits
Assessment Cash	$ 24,500.00	$ 18,000.00	$ 6,500.00	
Local Improvements Assessable	42,000.00	42,000.00		
Assessments Receivable	16,000.00	16,000.00		
Assessments Against City	8,000.00	8,000.00		
Due From Current Accounts	10,500.00		10,500.00	
Assessment Interest on Loans	150.00	150.00		
Assessment Loans	5,000.00	10,000.00		$ 5,000.00
Reserve for Assessment Obligations	20,000.00	20,000.00		
Assessment Claims Audited	20,000.00	29,150.00		9,150.00
Assessment Warrants Payable	18,000.00	20,000.00		2,000.00
Due to Current Accounts	2,000.00	2,000.00		
Assessment Revenues	1,000.00	1,000.00		
Assessment Surplus	150.00	1,000.00		850.00
Totals	$167,300.00	$167,300.00	$17,000.00	$17,000.00

CAPITAL AND SINKING FUND ACCOUNTS

108. It is believed that any system of municipal accounts is incomplete which does not include a record of the assets of the city as well as of its liabilities. Although public improvements are sometimes financed by means of taxes, that plan is unfair and inequitable, in that it imposes on the taxpayer of today the cost of a construction which will be enjoyed by future taxpayers, and hence the desirability of financing such work by long-term bonds.

The following is a list of the accounts in the Capital Group, these accounts being subdivided into Capital Section and Sinking Fund Section:

CAPITAL SECTION

DEBITS	CREDITS
Capital Cash	Capital Appropriations
Authorized Construction	Reserve for Capital Obligations
City Properties	Capital Claims Audited
	Capital Warrants Payable
	Premium on Bonds
	Capital Loans
	Capital Surpuls

SINKING FUND SECTION

Sinking Fund Cash	Sinking Fund Revenues
Sinking Fund Investments	Sinking Fund
Taxes Receivable—Arrears Pledged to Sinking Fund	Tax Arrears Sinking Fund
Sinking Fund Payments	

ENTRIES IN CAPITAL GROUP (CAPITAL SECTION)

109. When books are opened in a city that previously has kept no record of its city property, an inventory or list of such property will be prepared, in which a valuation is placed on the property as appraised or as it appears on the assessment rolls.

The following entry includes information indicating that upon opening the accounts construction of a capital improvement was in progress and that the authorization remains unencumbered to the amount of $15,000.00.

Capital Cash	$ 20,000.00	
*City Properties	400,000.00	
Authorized Construction	15,000.00	
To *Capital Appropriations		$ 15,000.00
*Capital Loans		250,000.00
Capital Surplus		170,000.00

110. Upon the decision of the proper board to make further capital improvements or to erect buildings, and upon certification of the same to the comptroller, an entry is made as follows:

Authorized Construction	$100,000.00	
To *Capital Appropriations		$100,000.00

The issue and sale of bonds or other loans to pay the cost of construction is recorded by this entry:

Capital Cash	$100,000.00	
To *Capital Loans		$100,000.00

If, upon the sale, the bonds bring a premium, the entry is:

Capital Cash	$1,000.00	
To Premium on Bonds		$1,000.00

111. Upon letting contracts or issuing orders chargeable to the construction, the transaction is recorded as follows:

*Capital Appropriations	$75,000.00	
To *Reserve for Capital Obligations		$75,000.00

When claims are presented for audit, the reserve set up by the preceding entry is cancelled, the appropriation restored and reduced by the amount of the claim by the following entries:

Reserve for Capital Obligations	$75,000.00	
To *Capital Appropriations		$75,000.00
*Capital Appropriations	$80,000.00	
To Capital Claims Audited		$80,000.00

112. The payment of capital claims audited, by the issue of capital warrants, is the same as in the case of current claims audited and is recorded by the following entries:

Capital Claims Audited	$80,000.00	
To Capital Warrants Payable		$80,000.00
Capital Warrants Payable	$80,000.00	
To Capital Cash		$80,000.00

113. The interest on the bonded debt and the maturing instalments of the issue are paid from current cash and the payments are recorded in the same manner as other current payments. The interest is a current expense of the city and upon payment leaves no tangible asset. Payments on account of the debt decrease the debt of the city and increase the capital surplus. Such payments being first entered in the current group and charged against Current Appropriations, are transferred to the capital group by means of a collateral entry in the following form:

Capital Loans	$10,000.00	
To Capital Surplus		$10,000.00

114. Upon the completion of a capital project, or at the end of the year, to the extent of the finished work evidenced by the payments during the year, the cost is added to the value of the city properties and Authorized Construction is diminished to the same extent. Upon the assumption that projects remain incomplete at the end of the fiscal year, the completed portion is transferred to City Properties account by the following entry:

*City Properties	$80,000.00	
To Authorized Construction		$80,000.00

115. Comment on the Foregoing Entries.—The account Capital Cash is in all respects the same as the other cash accounts; it serves, however, to segregate funds applicable only to the payment of the cost of capital improvements.

116. The account called City Properties is intended to provide a permanent record of the property of the city. When this account is opened it is debited with the appraised or assessed value of the property belonging to the city—that is, lands, buildings, waterworks, etc.—and with the cost of all new capital construction when completed. It is credited with

the value of all such property sold or destroyed. The debit balance shows the book value of property owned by the city.

117. The account called Authorized Construction is a temporary account intended to withhold from City Properties account the units of capital construction not completed. Authorized Construction is debited with the amount of capital construction work authorized and credited with the amount completed.

118. The accounts called Capital Appropriations, Reserve for Capital Obligations, Capital Claims Audited, and Capital Warrants Payable are in all respects similar to the accounts in the current group called Current Appropriations, Reserve for Current Obligations, Current Claims Audited, and Current Warrants Payable, and are all developed along similar lines.

ENTRIES IN CAPITAL GROUP (SINKING FUND SECTION)

119. Upon opening the books or when a sinking fund is established by setting aside an amount of cash or investments, the fact is recorded as follows:

Sinking Fund Cash	$10,000.00	
Sinking Fund Investments	15,000.00	
To Sinking Fund		$25,000.00

If more than one sinking fund is in existence or is established, each should be distinguished by further descriptive words as "School Bonds," "Water Bonds," or as the case may be.

120. From time to time as the bank balances earn interest or as interest is collected on investments, record is made as follows:

Sinking Fund Cash	$750.00	
To Sinking Fund Revenues		$750.00

121. Payments from the sinking fund are entered as follows:

Sinking Fund Payments	$10,000.00	
To Sinking Fund Cash		$10,000.00

If any part of the Sinking Fund Cash be invested in securities, the record is as follows:

Sinking Fund Investments	$2,500.00	
To Sinking Fund Cash		$2,500.00

If any part of the investments are sold or liquidated, the last preceding entry is reversed in this form:

Sinking Fund Cash	$1,000.00	
To Sinking Fund Investments		$1,000.00

122. The status of the sinking fund will be shown at the end of the year by debiting the Sinking Fund account with Sinking Fund Payments and crediting the same account with the amount of Sinking Fund Revenues. The following are the entries:

Sinking Fund	$10,000.00	
To Sinking Fund Payments		$10,000.00
Sinking Fund Revenues	750.00	
To Sinking Fund		750.00

123. Statutes authorizing or requiring the setting aside of a sinking fund usually contain a provision requiring the municipality to contribute annually to the sinking fund. The amount of the contribution will appear in the budget as an appropriation and will be charged out of current accounts by an entry similar to those recording other current payments and is thereupon recorded in the sinking fund section of the capital group of accounts by the following entry:

Sinking Fund Cash	$1,000.00	
To Sinking Fund		$1,000.00

A sinking fund is established to provide payment of bonds, an appropriation therefor being made in the budget, which is offset by a debit to an account in the current group called Sinking Fund Contribution Required, as explained in Arts. **40** and **45.** When the amount of the contribution is transferred to the current accounts, the fact is recorded by a collateral entry

in the current group debiting Current Cash and crediting Sinking Fund.

124. Comments on the Foregoing Entries.—The account called Sinking Fund Cash, in the same way as other cash accounts, is debited with the amount of Sinking Fund Cash received and credited with the amount paid out, the debit balance representing the cash on hand.

125. The account called Sinking Fund Investments is debited with the amount of investments acquired for the sinking fund and credited with the amount of the same sold or liquidated. The debit balance shows the amount of investments owned by the sinking fund.

126. The account called Sinking Fund Revenues is credited with the amount of earnings on sinking fund investments, interest on bank balances, and other revenues applicable to the sinking fund. This account will show a credit balance, reflecting the amount of revenues earned during the year, until the end of the year, when it is closed into Sinking Fund account.

127. The account called Sinking Fund Payments is debited with the amount of payments from the Sinking Fund for redemption of bonds, and with the amount of contributions to current accounts. This account will show a debit balance, reflecting the payments made during the year, until the end of the year, when it will be closed into Sinking Fund account.

128. The account called Sinking Fund is credited with the amount of sinking fund cash and investments on hand when the account is opened and with the amount of contributions from the budget.

At the end of the fiscal year this account is debited with the amount of the balance of the Sinking Fund Payments account and is credited with the amount of the balance of the Sinking Fund Revenues account, thus reflecting the status of the Sinking Fund.

129. Trial Balance.—A trial balance of Capital and Sinking Fund accounts is shown herewith.

TRIAL BALANCE—CAPITAL AND SINKING FUND ACCOUNTS

Capital Section	Total of Entries		Balances	
	Debits	Credits	Debits	Credits
Capital Cash..	$ 121,000.00	$ 80,000.00	$ 41,000.00	
City Properties	480,000.00		480,000.00	
Authorized Construction	115,000.00	80,000.00	35,000.00	
Capital Appropriations....	155,000.00	190,000.00		$ 35,000.00
Capital Surplus		180,000.00		180,000.00
Capital Loans.	10,000.00	350,000.00		340,000.00
Premium on Bonds		1,000.00		1,000.00
Reserve for Capital Appropriations.	75,000.00	75,000.00		
Capital Claims Audited.....	80,000.00	80,000.00		
Capital Warrants Payable.........	80,000.00	80,000.00		
Totals......	$1,116,000.00	$1,116,000.00	$556,000.00	$556,000.00
Sinking Fund Section:				
Sinking Fund Cash........	$ 12,750.00	$ 12,500.00	$ 250.00	
Sinking Fund Investments.	17,500.00	1,000.00	16,500.00	
Sinking Fund..	10,000.00	26,750.00		16,750.00
Sinking Fund Revenues ...	750.00	750.00		
Sinking Fund Payments...	10,000.00	10,000.00		
Totals......	$ 51,000.00	$ 51,000.00	$ 16,750.00	$ 16,750.00

TRUST ACCOUNTS

130. Cities are sometimes entrusted with the custody of funds or investments in which they have no proprietary interest and the accounts recording the receipt and disbursement of such funds are known as trust accounts.

The following is a list of the accounts in the Trust Group:

Debits	Credits
Trust Cash	Pension Fund Revenues
Pension Fund Investments	Trust Claims Audited
Pension Fund Payments	Trust Warrants Payable
	Pension Fund
	Trust Account (properly denominated)

ENTRIES IN TRUST GROUP

131. Upon receipt of cash to be held in trust, Trust Cash is debited and an account naming the character of the trust—for example, Police Pension Fund, Teachers' Retirement Fund, Contractors' Retainers, etc.—is credited. The following illustrative entries are based on the assumption that a Police Pension Fund is established with certain investments of the value of $20,000.00 and cash to the amount of $5,000.00. The opening entry is as follows:

Trust Cash	$ 5,000.00	
Pension Fund Investments	20,000.00	
To Police Pension Fund		$25,000.00

Upon receipt of cash other than revenues to be applied to the same purpose, record is made as follows:

Trust Cash	$500.00	
To Police Pension Fund		$500.00

Upon receipt of interest earned on investments or of other revenues pledged to the fund by law, an entry like the following is made:

Trust Cash	$500.00	
To Police Pension Fund Revenues		$500.00

Upon the sale or liquidation of investments owned by the fund the entry is:

Trust Cash	$2,500.00	
To Police Pension Fund Investments		$2,500.00

Upon the purchase of additional investments the entry is:

Police Pension Fund Investments	$1,000.00	
To Trust Claims Audited		$1,000.00

Upon the payment of pensions to persons entitled thereto the entry is:

Police Pension Fund Payments	$500.00	
To Trust Claims Audited		$500.00

Upon issuing warrants in payment of trust claims the entry is:

Trust Claims Audited	$1,500.00	
To Trust Warrants Payable		$1,500.00

Upon payment of trust warrants the entry is:

Trust Warrants Payable	$1,500.00	
To Trust Cash		$1,500.00

Closing entries are:

(*a*) Pension Fund Revenues	$500.00	
To Police Pension Fund		$500.00
(*b*) Police Pension Fund	$500.00	
To Pension Fund Payments		$500.00

132. Trial Balance.—The following is a trial balance of this group of accounts after making the foregoing entries:

TRIAL BALANCE—TRUST ACCOUNTS

	Total of Entries		Balances	
	Debits	Credits	Debits	Credits
Trust Cash	$ 8,500.00	$ 1,500.00	$ 7,000.00	
Police Pension Fund Investments	21,000.00	2,500.00	18,500.00	
Police Pension Fund Payments	500.00	500.00		
Police Pension Fund Revenues	500.00	500.00		
Trust Claims Audited	1,500.00	1,500.00		
Trust Warrants Payable	1,500.00	1,500.00		
Police Pension Fund	500.00	26,000.00		$25,500.00
Totals	$34,000.00	$34,000.00	$25,500.00	$25,500.00

APPENDIX

133. In the following pages are illustrations of the statements that form parts of the Annual Report required in connection with a system of accounts such as has been described in the preceding pages.

SUMMARY OF CURRENT REVENUES AND EXPENSES

Revenues			
Surplus of prior year			$....
Taxes of current year:			
Amount of levy		$......	
Less: Levy for state and county purposes		......	......
Tax revenues, city purposes			$....
Miscellaneous revenues:			
....		......	
....		......	......
Total			$......
Public Utilities—Commercial:			
Municipal water department			
Surplus of prior year		$......	
Water department revenues		......	
Total			$....
Municipal lighting department:			
Surplus of prior year		$......	
Lighting department revenues		......	
Total			$......
Total current revenues			......
Proceeds of deficiency bonds		$....	
Current deficit:			
General tax revenues	$....		
Municipal water department	....		
Municipal lighting department	......	......	$......
Total			$......

EXPENSES

General government		$....	
Protection of persons and property		....	
Conservation of health			
Sanitation and promotion of cleanliness			
Highways			
Charities and corrections			
Education			
Recreation			
Public utilities, non-commercial			
Miscellaneous			
Municipal indebtedness	$......		
Less: Contributions from sinking funds	......	......	
Construction and permanent improvements		......	......
Total			$......
Public utilities—commercial:			
Municipal water department			$......
Municipal lighting department			......
Total current expenses			$......
Reserve for uncollected taxes provided in current levy			$......
Deficiencies of prior year:			
General		$....	
Municipal water department		......	
Municipal lighting department		......	
Total			$....
Current surplus:			
General		$....	
Municipal water department		......	
Municipal lighting department		......	
Total			$......
			$......

Balance Sheet—Current Accounts

Assets

Cash:		
Current cash	$....	
Tax arrears cash	.....	
Water cash	......	$......
Taxes receivable:		
Current city taxes	$....	
County taxes	......	
Arrears of taxes	......	$......
Water rents receivable		$....
Accounts receivable		....
Due from other accounts		......
Materials and supplies		......
Total		$......
Current deficit:		
General	$....	
Municipal water department	......	
Municipal lighting department	......	
Total		$......
		$......

Liabilities

Current warrants payable	$....	
Current claims audited	....	
Current loans	......	
Due to other accounts		
Due to county treasurer		
Reserve for current obligations		
Reserve for arrears of taxes		
Inventory surplus		
Total		$....
Current surplus:		
General	$....	
Municipal water department	......	
Municipal lighting department	......	
Total		$......

Balance Sheet—Assessment Accounts

Assets

Assessment cash	$....	
Assessments receivable	....	
Assessments against city		
Local improvements authorized		
Local improvements assessable	......	
Due from other accounts	......	
Total		$......
Assessment deficit		......
		$......

Liabilities

Assessment warrants payable	$....	
Assessment claims audited	....	
Assessment loans		
Assessment appropriations		
Accounts payable		
Due to other accounts	......	
Reserve for assessment obligations	......	
Total		$......
Assessment surplus	......	......
		$......

Balance Sheet—Capital and Sinking Fund Accounts

Assets

Capital accounts:		
Capital cash	$....	
Due from other accounts	....	
Authorized construction	......	
City properties	......	
Total		$....
Sinking fund accounts:		
Sinking fund cash	$....	
Sinking fund investments	......	
Taxes receivable—Arrears pledged to sinking funds	......	
Total		$......

Liabilities

Capital accounts:		
Capital warrants payable	$....	
Capital claims audited	....	
Due to other accounts		
Capital appropriations		
Reserve for capital obligations	......	
Capital loans	......	
Total		$....
Sinking fund accounts:		
Due to other accounts	$......	
Total		$......
Surplus:		
Capital surplus	$....	
Sinking funds	....	
Total		$......
		$......

BALANCE SHEET—TRUST ACCOUNTS

Assets

Trust cash	$....	
Police pension fund investments	....	
Firemen's pension fund investments	......	
School teachers' pension fund investments	......	
Total		$......

Liabilities and Reserves

Trust warrants payable	$....	
Trust claims audited	....	
—trust account		
—trust account		
—trust account	...	
Police pension fund	....	
Firemen's pension fund	......	
School teachers' pension fund	......	
Total		$......

GRAPHS

USE AND PREPARATION OF GRAPHS

PRELIMINARY REMARKS

1. According to the Standard Dictionary, graphs describe with pictorial effect and illustrate ideas by drawings, pictures, or diagrams. By their use, bookkeepers and accountants can more strikingly present an analysis of all or parts of business statements and reports than can be done in figures, and for this purpose there is almost no limit to the features of the business which may be so expressed. Of the many forms in use, the most common are the straight-line, the broken-line, and the circle graphs.

2. The volume of sales, for example, daily, weekly, monthly, or yearly or for longer periods may be so strikingly shown by a line graph as to bring out the high and low points and average, and whether or not the trend is continuously upward or otherwise. Other lines may be added to the graphs to show features more or less related to sales.

Special features such as the percentage division or total expenses, whether for a factory or store or department, are presented more clearly for study by circle graphs than perhaps any other way; also, such features as an analysis of sales either with dollars, the number of sales, or the number of customers, as a basis, for example; what percentage of ledger accounts take a discount, pay in 30 days, take more than the allowed time, give notes, or finally become worthless. In another form,

they may show what percentage of accounts represents 1, 2, 3, 4, or more years continuous business, or new business; what proportion of the total sales are charge, cash, C. O. D.'s, and approval, etc.

It is impossible to give here anything like the number of uses to which all or any kind of graph is adapted, or the combinations in which they may be useful, or how much or how far all or each may be used. The extent to which graphs may be valuable in any line of business depends on the ingenuity of the user.

STRAIGHT-LINE GRAPHS

SIMPLEST FORMS

3. To prepare a straight-line graph, a unit of measurement must first be decided on and then this unit must be multiplied or divided to make up the comparative lines that form the graph.

These lines can be run either horizontally or vertically, but all must have the same direction and be of the same comparative

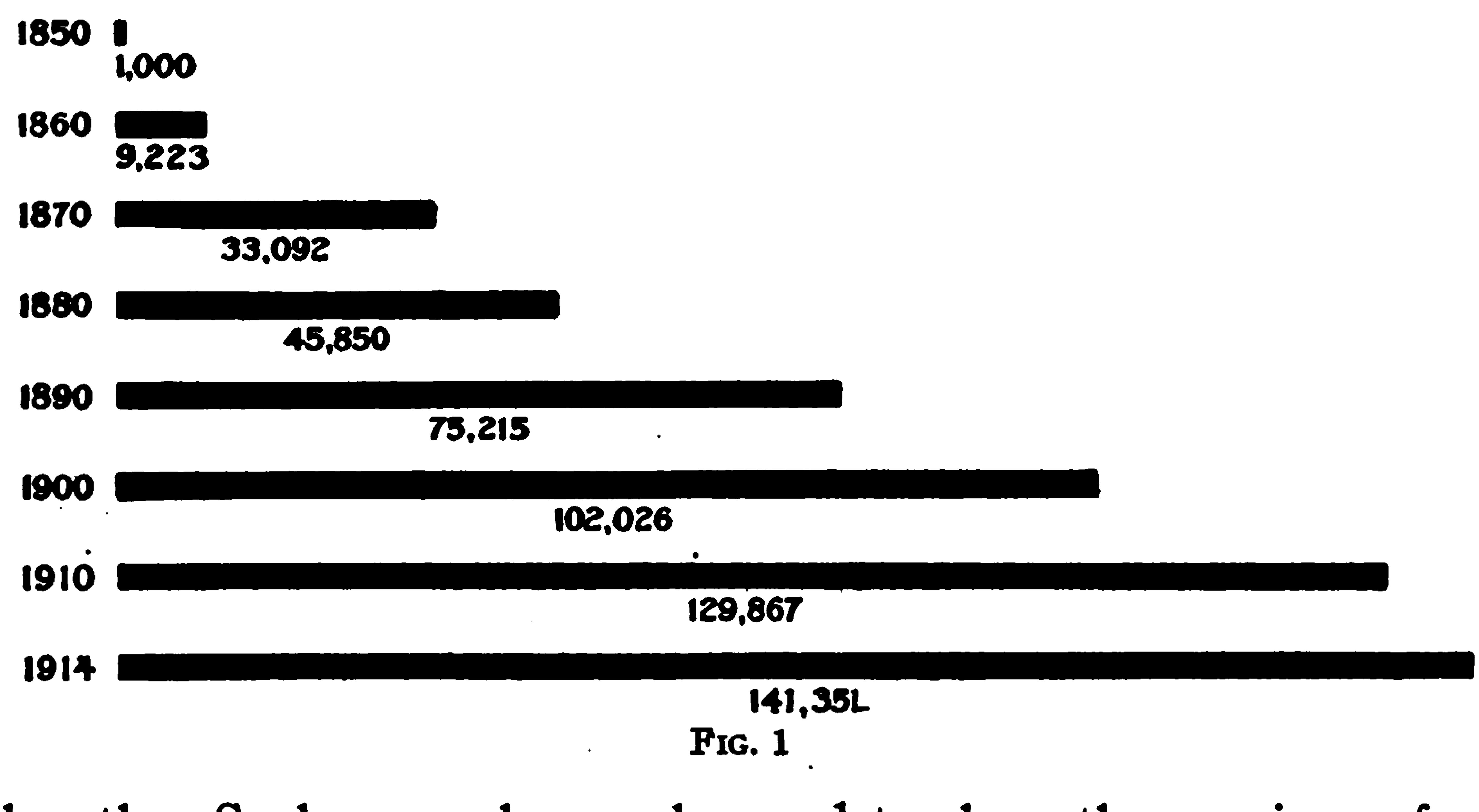

FIG. 1

length. Such a graph may be used to show the earnings of a company year by year, month by month, or any other comparative period, or to show the growth of a business by periods; in fact, the relation of any set of figures to any other set can be shown by these straight lines.

For example, Fig. 1 shows the growth of a city. The first year of which there is a record the population was 1,000. Using this as a basis and adopting a scale of some convenient size, say, $\frac{1}{10}$ inch to 1,000 population, the first line may be drawn this length. The second line to show a population of 9,223 will then have to be $9.223 \times \frac{1}{10} = .922\frac{3}{10}$, which is .92 inch long. The third line, to show a population of 33,093, must be $33.092 \times \frac{1}{10}$, or 3.3 inches long. By the same method, it will be found that the other lines will be 4.58, 7.5, 10.2, 12.9, and 14.1 inches long; the last line shows the population of the city at the beginning of the year 1914. This graph shows the total population at

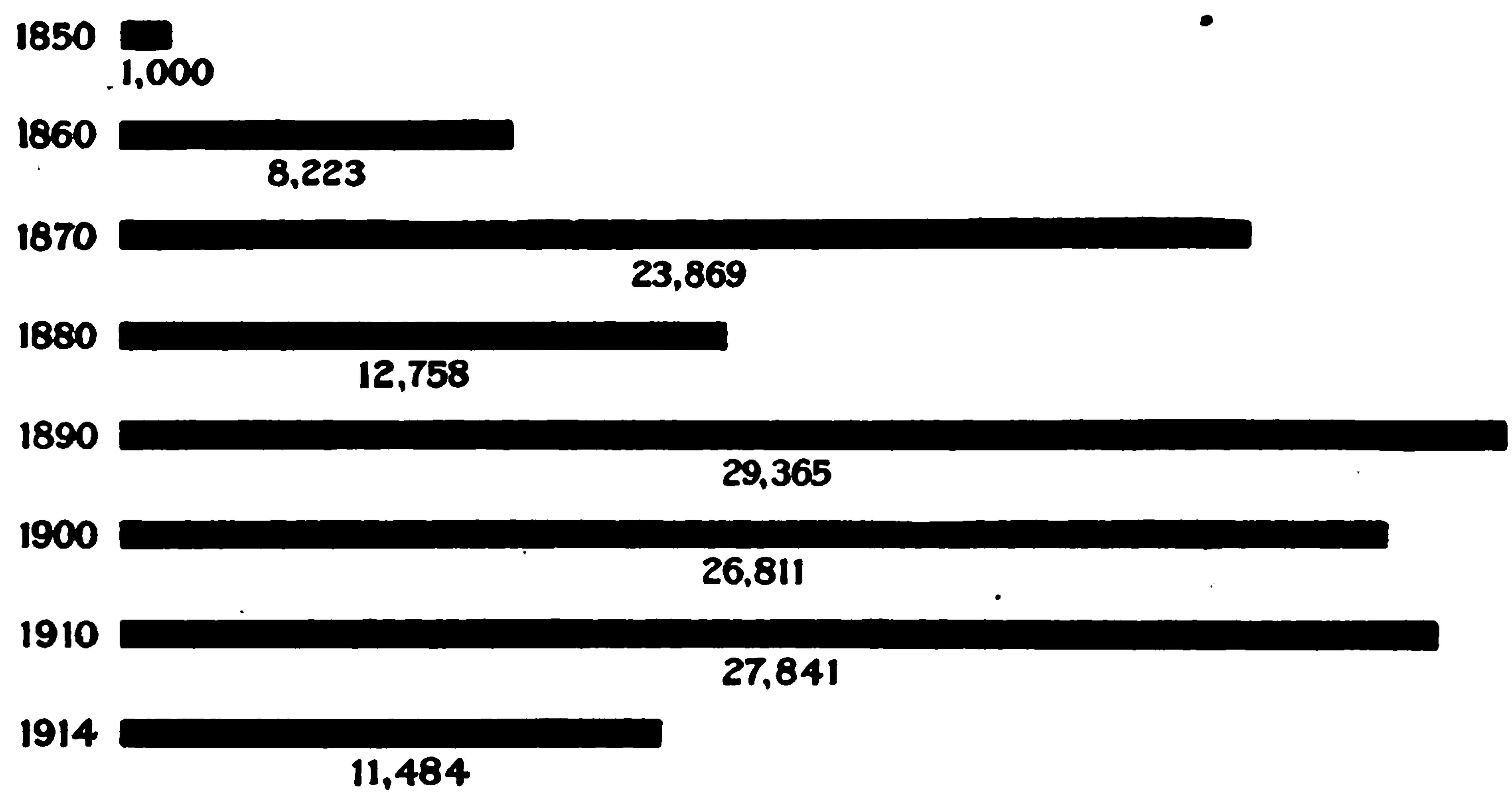

FIG. 2

any of the given periods; to determine the growth during any period, subtract the figures of the preceding period from those of the required period.

4. To make a chart, Fig. 2, to show the growth by periods, find the figures showing the growth for each period as just described, then determine upon a unit of measurement, say $\frac{1}{4}$ inch = 1,000. Then, for the first year the line will be $\frac{1}{4}$ inch long. To find the length of the second line, subtract 1,000 from 9,223, which was the total production; this leaves 8,223 as the increase in population for the period. Drawn to the adopted scale this will give a line 2.5 inches long. For the third period, subtract 9,223 from 33,092, which gives 23,869 as the growth; drawn to scale this will give a line 5.95 inches long.

By the same method, the other lines will be 3.19, 7.35, 6.7, 6.95, and 2.87 inches long.

A study of Fig. 1 will show that the city had a good healthy growth during the whole term given, as each period shows a good increase in population. However, a study of the second chart will show that while the city increased every period, during the period 1870 to 1880 the increase was only about 50 per cent. that of the preceding period. The period between 1880 and 1890 shows an unusual increase of 230 per cent. over the preceding 10 years. The two following periods show normal increases.

The last line shows an increase for only a portion of a period. To compare this with the other periods it will be necessary to reduce the figures to one-tenth of a period or 1 year. To do this the figures 11,484 must be divided by 4, which gives 2,871. This shows that this period compares very favorably with the best of the preceding periods, for if this same growth is continued for the remainder of the 10 years it will give an increase for the period of 28,710.

5. Variations in Arrangement.—While the charts given in Figs. 1 and 2 have the figures and dates printed over each line, figures may be placed at the top and sides of the chart and light vertical lines spaced at uniform distances representing fixed sums dropped from the top figures. For example, lines may be spaced at uniform distances representing increases of 500 and these spaces could be subdivided by four lines representing 100. The lines of the graph could then be laid out across these vertical lines and extend past the nearest 500 subdivision to the number required; if the graph line should represent a fraction of 100 the space between the 100 subdivisions may be divided by the eye.

BLOCKS AS GRAPHS

6. Straight lines can be changed into blocks by simply widening the lines. The blocks may then be used to represent the same things as the plain lines, but the blocks will have

the advantage that each block may be divided into sections by coloring or cross-sectioning. A chart made of blocks is shown in Fig. 3; this chart gives the resources of banks in the reserve districts. The total resources of each district are divided into three sections representing cash, loans, and other resources. As it is necessary to know in what form these resources are, the complete blocks which represent the total

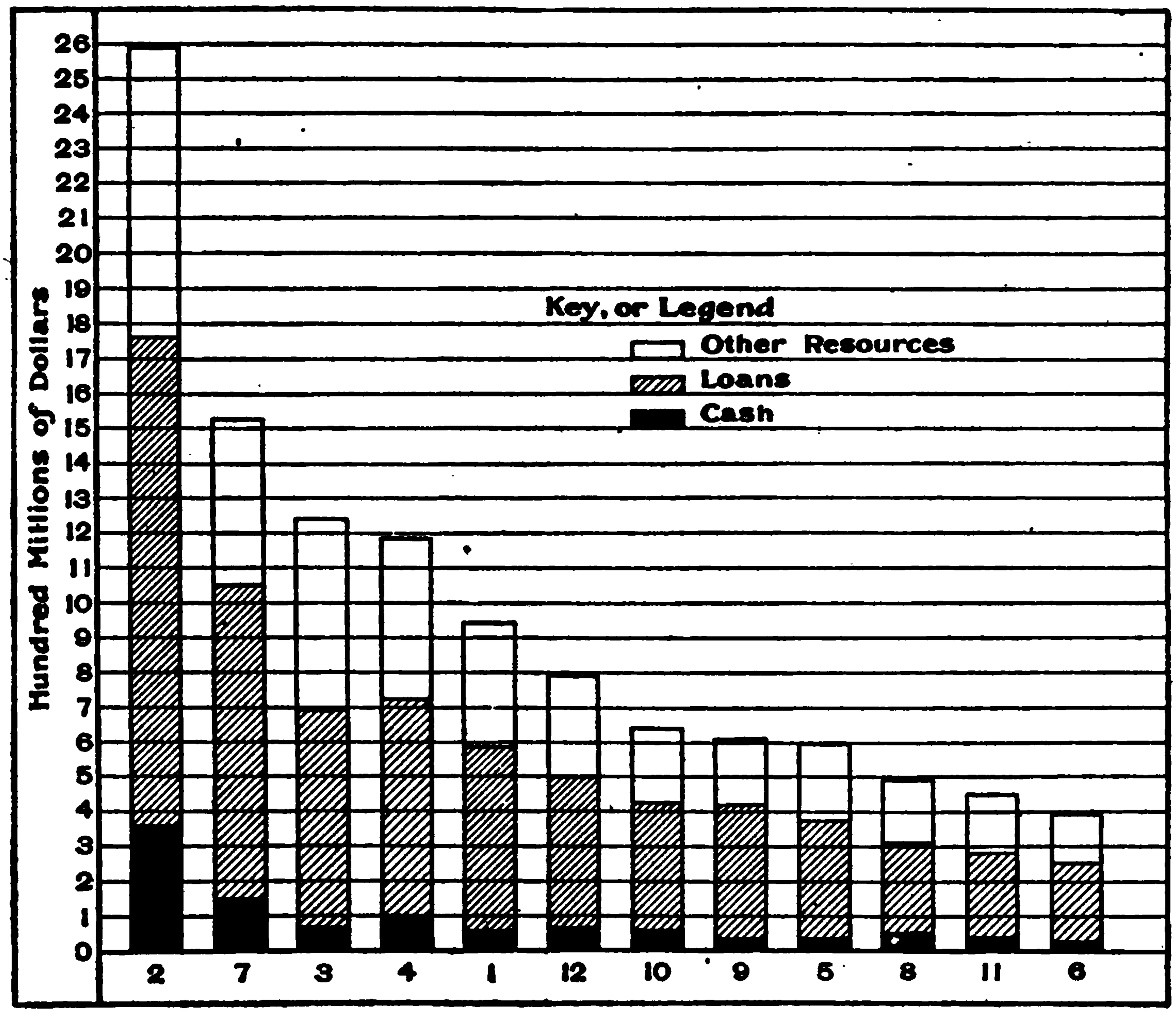

Fig. 3

resources of each district, are sectioned to represent the proportionate amount of cash, loans, and other resources, as shown by the key. The chart could be drawn on section paper with amounts marked in the margin to indicate the amounts that the different items represent. When this is done, to find the total amount of each kind of resource, the cash will be read direct from the chart figures; the amount of loans is found by subtracting the amount of the cash from the amount coinciding with the top of the loan section; the amount of the other

resources is found by subtracting the amount coinciding with the top of the loan section from the amount opposite the top of the block.

Another way of indicating the amounts is to print the figures either in or opposite each section. The best method to use is the one that will make the most striking comparison.

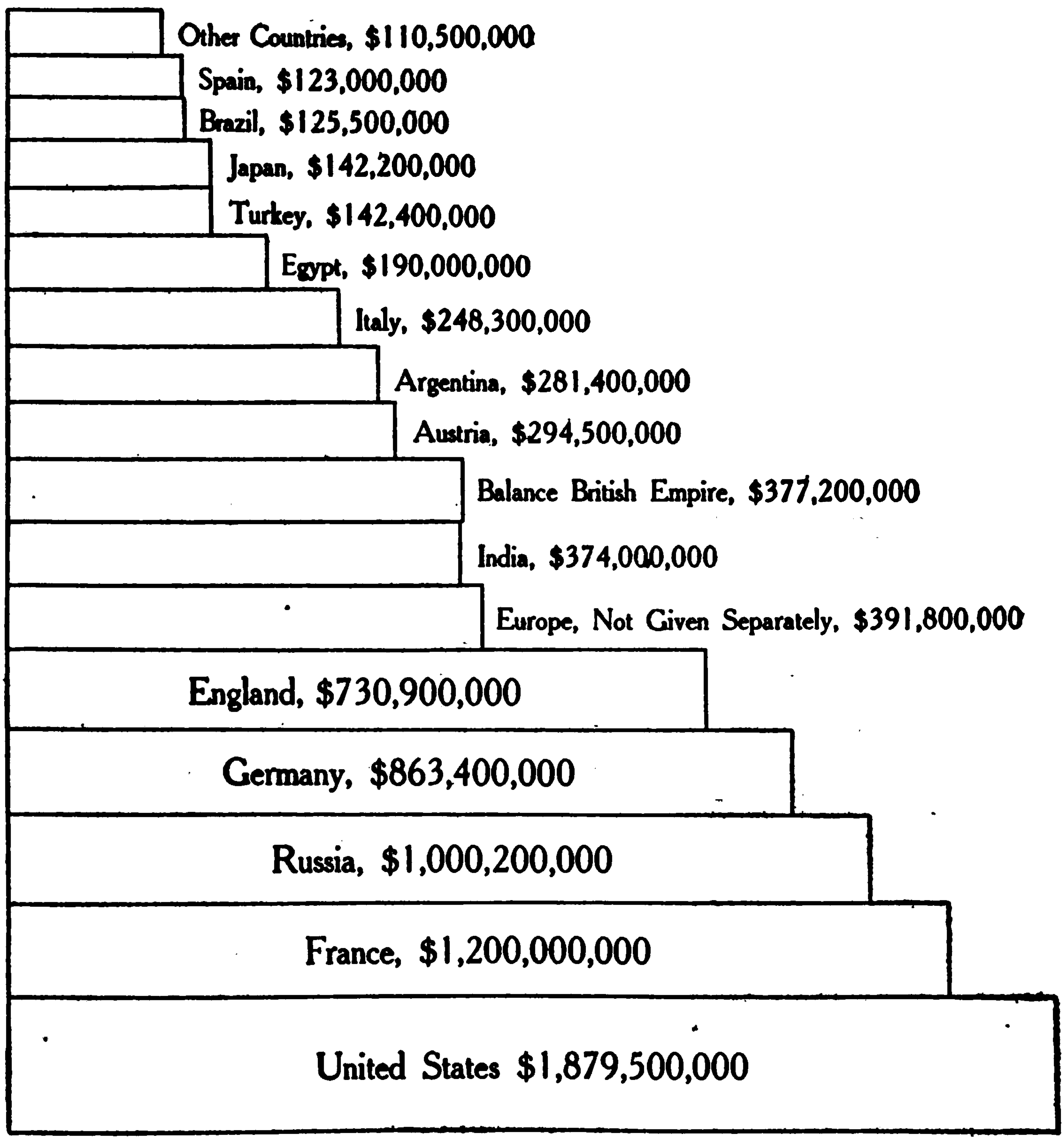

Fig. 4

7. Blocks or lines can be used in many other ways; Fig. 4 shows blocks used as steps. The size of the blocks are relatively proportioned by their cubic contents; lines could be used in the same form but using only proportionate lengths. Another manner in which the blocks can be used to advantage is as shown in Fig. 5, where the blocks represent the proportion that the

different items of cost bear to one another and to the total cost and selling price of a manufactured product. The first block represents the cost, $25, of material used in the manufacture of an article. Stepped on this is a block that represents the cost of the labor, $50, entering into the manufacture. Together these two items form the primary cost, $75. On top of the primary cost is added the block representing indirect expenses, $50; this, with the primary cost, makes the final factory cost of the product, $125. To the final factory cost is added the block representing the selling and administrative expenses, $25, which with the final factory cost makes the

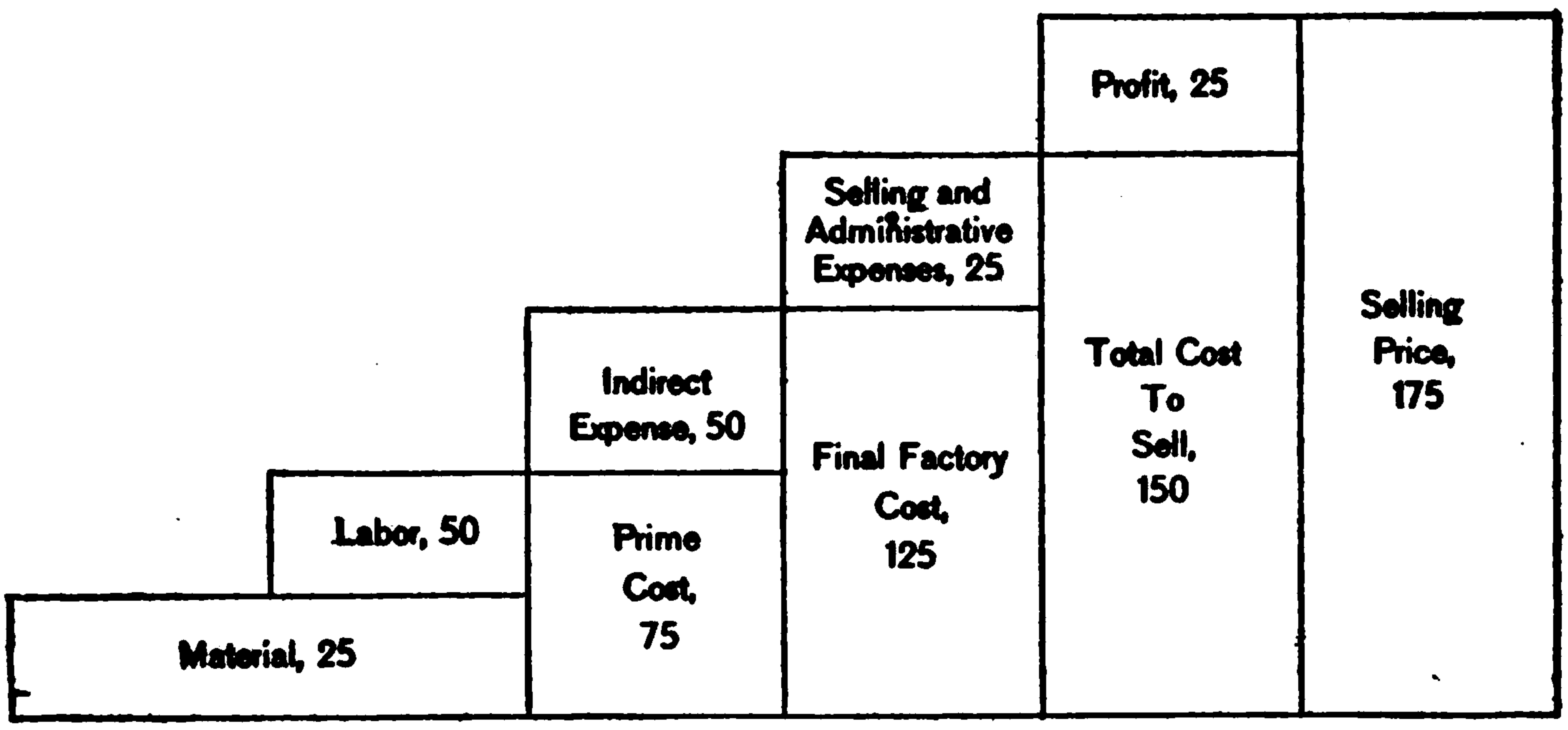

FIG. 5

total cost of the product to sell, $150. To this total cost to sell is added a block for the profit, $25, which makes the final step and gives the selling price of the product, $175.

BROKEN-LINE GRAPHS

8. **Broken-line graphs, or line charts,** are useful in showing the fluctuations in any business or part of a business. This style of graph compares the results of a business and is best constructed on section paper. The units of the business are usually placed vertically at the sides of the chart and the periods of time, arranged horizontally, are shown at the top and bottom of the chart, as in Fig. 6. In this case, the periods of time are the calendar months of the years 1913 and 1914; therefore,

each vertical line represents 1 month; the units of measurement are hundreds of dollars, so the space between each horizontal line represents $100.

9. As a basis for constructing a chart it will be assumed that the figures on page 9 show the railroad revenues and expenses per mile of road for the periods shown.

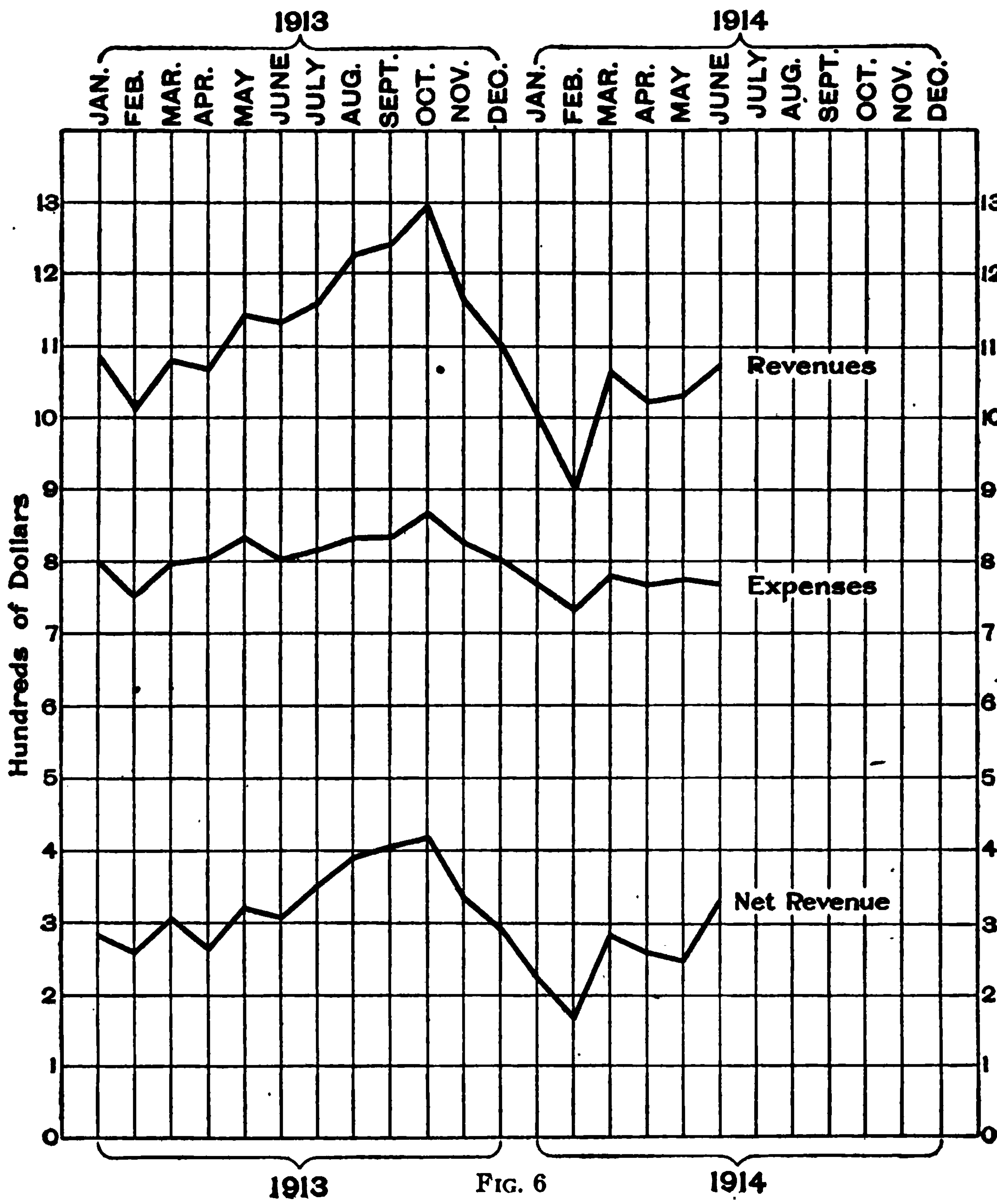

Fig. 6

First, the range of the figures must be considered, in order that the scale to which the chart must be made shall be of a convenient size. The range of the figures for the periods of time is January, 1913, to December, 1914, inclusive, making twenty-four periods, each rĕpresented by a vertical line. For the

1913	Operating Revenue	Operating Expenses	Net Revenue
January	$1,090	$800	$290
February	1,010	760	250
March	1,080	790	290
April	1,070	810	260
May	1,150	830	320
June	1,140	800	340
July	1,160	810	350
August	1,225	830	395
September	1,250	840	410
October	1,290	870	420
November	1,160	825	335
December	1,100	800	300
1914			
January	1,000	775	225
February	900	730	170
March	1,070	790	280
April	1,025	770	255
May	1,040	780	260
June	1,080	770	310

units of measurement by dollars, the lowest is $170 and the highest $1,290. By making the space between each horizontal line represent $100, it is possible to start from zero and mark up fourteen lines so as to give a margin at the top and bottom. Starting from the bottom, the horizontal lines may, therefore, be numbered *0*' *1*, *2*, *3*, etc. and at the top of each vertical line the month may be written, and above the months the year may be designated. With this done the line for operating revenues may be plotted. The figures show that the operating revenue for January, 1913, was $1,090; therefore, on the line representing January, 1913, the horizontal line representing $1,000 is found and on the January line a point marked off nine-tenths of the distance between the $1,000 line and the $1,100 line, as 90 is nine-tenths of the difference between $1,000 and $1,100. On the vertical line representing February, point off $1,010; this will be located one-tenth of the space above line *10*.

For March, the point is located eight-tenths of the distance between the lines *10* and *11*. For April, seven-tenths above line *10*; for May, five-tenths, or midway between *11* and *12*, and in like manner for all the months listed. After the points are located straight lines connecting the adjacent points should be drawn; this will give the graph for the operating revenues.

In the case of the operating expenses per mile, the points are located in the same manner as were the points for the operating revenues; connecting lines are then drawn, as before, to complete the graph.

10. The net operating revenues are the difference between the gross operating revenues and the gross operating expenses. For any month this is equal to the distance between the points designating operating revenues and operating expenses on the line representing that particular month. The total net revenues is equal to the space between the operating-revenue graph and the operating-expenses graph. This space, to show the net revenue clearly, can be shaded or colored, as in Fig. 7.

11. Use of Line Charts.—Graphs can be used for comparison of prices of different commodities, etc. and to show how these prices fluctuate week by week and year by year. In Fig. 8 is shown a comparison of the rates of foreign exchange for the years 1904, 1905, and 1909. A reference to the key will show that the heavy black lines represent the prices week by week for 1904, the light full lines give the prices for 1905, and the dotted lines the prices for 1906. These lines could be shown by different colors as well as by different construction, or additional lines varying in construction or color may be added to the chart to show subsequent year's prices. This chart is divided into three parts, one dealing with the price of sterling, one with the price of francs, and one with the price of marks, but all parts are constructed from the weekly exchange quotations. Notice that the peaks, or high points, point to the par value; that is, the figures in the charts for sterling and marks are arranged in an ascending order, as these prices are at a discount, while the figures for the prices of francs are arranged in a descending order, as francs are at a premium.

FO

Key 1904 —— 1905 —— 1906 --------

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G. 8

12. High and low graphs are useful in listing high and low prices for stocks, bonds, or other commodities. To construct this style of graph, the high quotations are charted the same as in the previous examples and then the low prices, the space

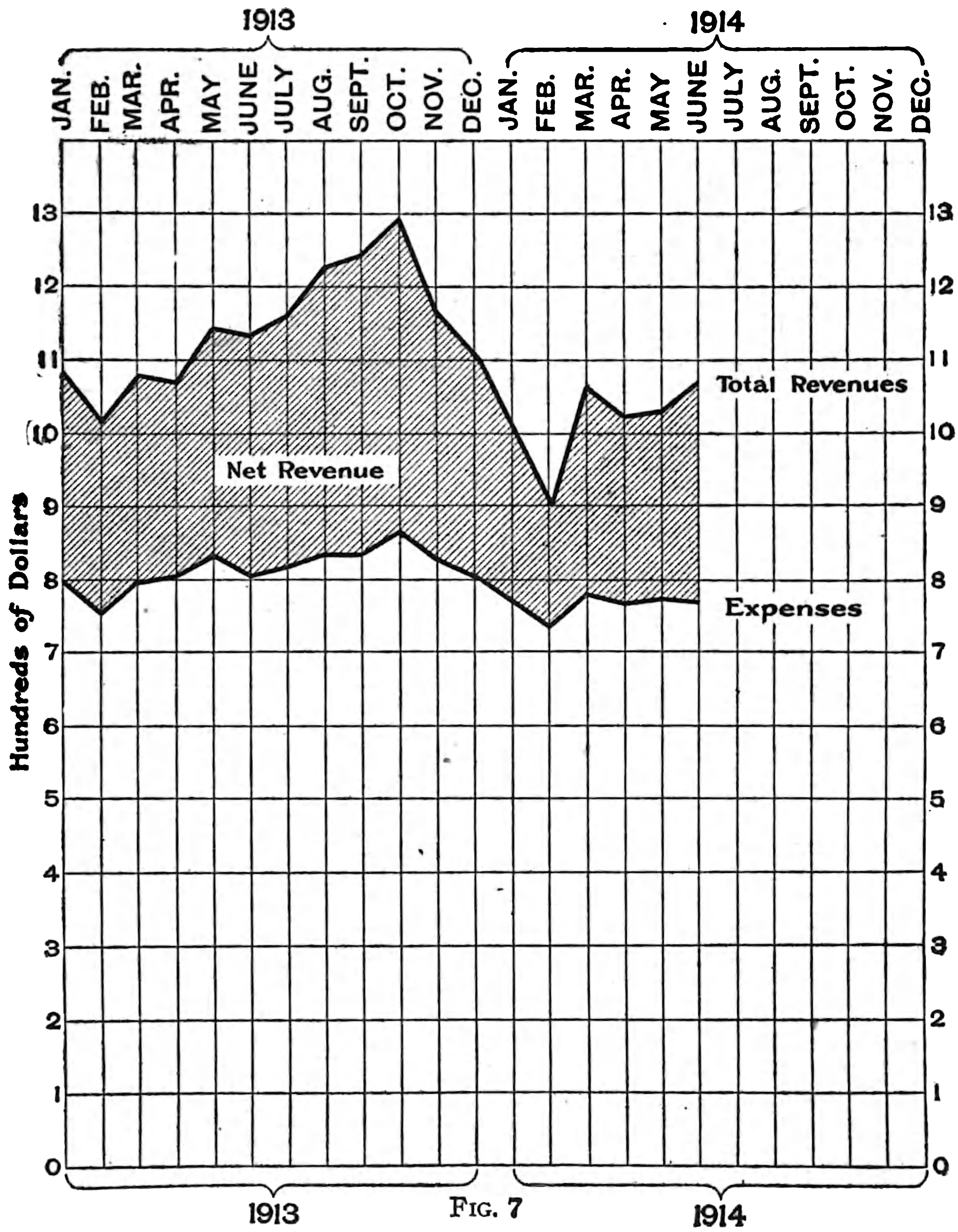


FIG. 7

between the two graphs, is then shaded or colored so as to form a wide line. The intersection of the top of this line with a line representing any period will then show the high prices and likewise the intersection of the bottom will show the low prices for that period. Such a graph is shown in Fig. 9.

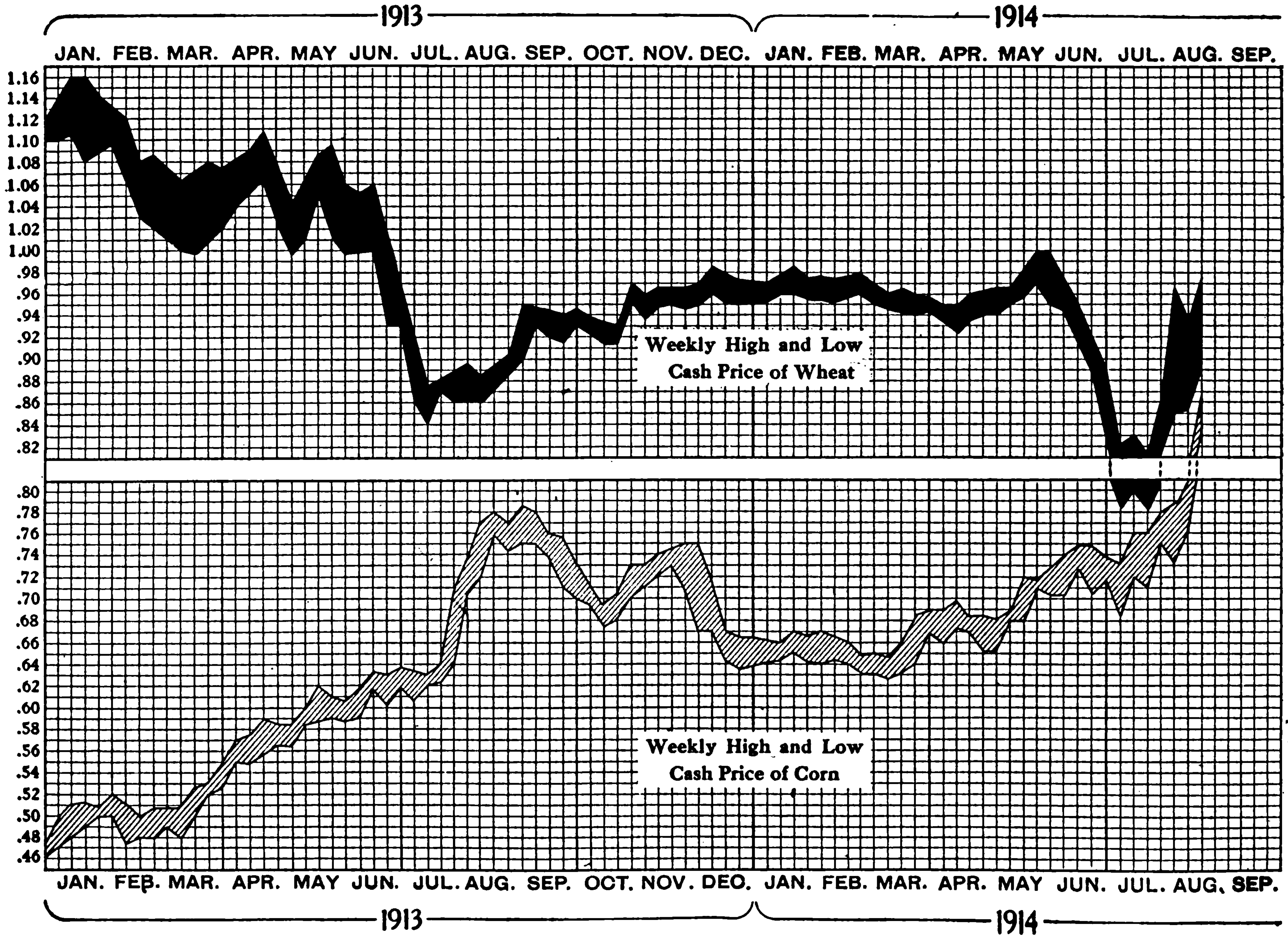
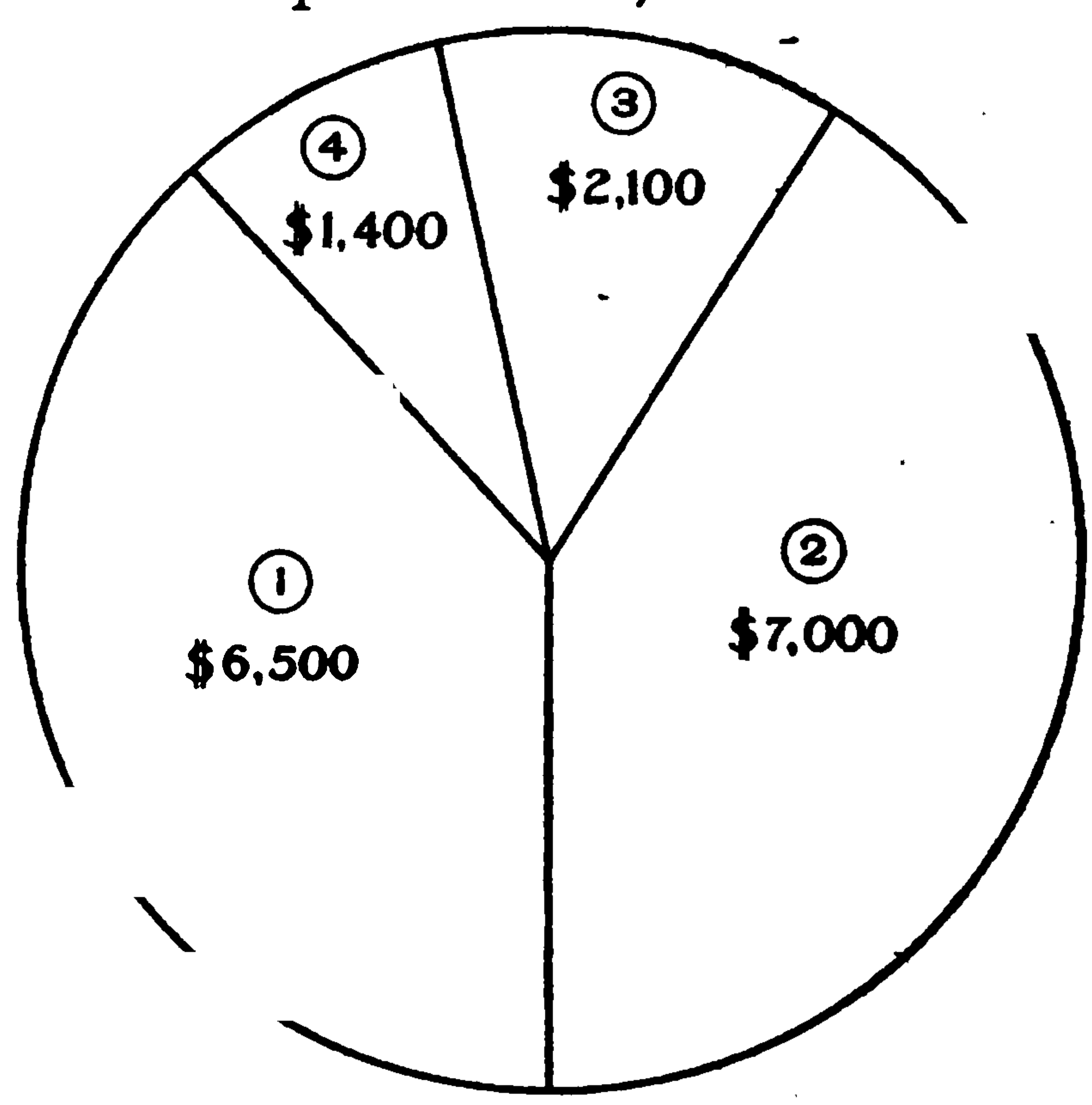

1913
1914
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP.
1.16 1.14 1.12 1.10 1.08 1.06 1.04 1.02 1.00 .98 .96 .94 .92 .90 .88 .86 .84 .82
.80 .78 .76 .74 .72 .70 .68 .66 .64 .62 .60 .58 .56 .54 .52 .50 .48 .46
Weekly High and Low
Cash Price of Wheat
Weekly High and Low
Cash Price of Corn
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP.
1913
1914

FIG. 9

CIRCLE GRAPHS

13. Circular graphs represent different phases of business activity and show the relation of the various items to the business as a whole. To construct one of these graphs a circle is drawn to any convenient scale to represent the total business. To reduce the different items of the business into their proportionate number of degrees, all the items must be added together to get the total business; the relation that each item bears to the total business will be shown by a subdivision bearing the same relation to the complete circle, or 360°. For example, if a business consists of four departments, one of which has a net revenue of $6,500, another has a net revenue of $7,000, a third has a net revenue of $2,100, and the fourth a net revenue of $1,400, the total net revenue will then be $17,000.



Total Business
$17,000
FIG. 10

The complete circle, or 360°, will then represent the total business of $17,000. The section of it that will represent department *1* will bear the same relation to the complete circle, or 360°, as $6,500 bears to $17,000. By proportion, dropping the hundreds, this section will be $65 : 170 = x : 360$, or multiplying the extremes and dividing by the mean, $\frac{65 \times 360}{170} = 138°$. For department *2*, the section will be $70 : 170 = x : 360 = \frac{70 \times 360}{170} = 148°$. For department *3*, the section will be $21 : 170 = x : 360 = \frac{21 \times 360}{170} = 44°$. For department *4*, the section will be $14 : 170 = x : 360 = \frac{14 \times 360}{170} = 30°$. This graph is shown in Fig. 10.

To prove, these sections should be added together and their sum should equal 360; 138°+148°+44°+30°=360°. These degrees are laid off on the circumference with a protractor and radial lines drawn from these points to the center; the spaces between these lines will then represent in proper proportion the different items of net revenue.

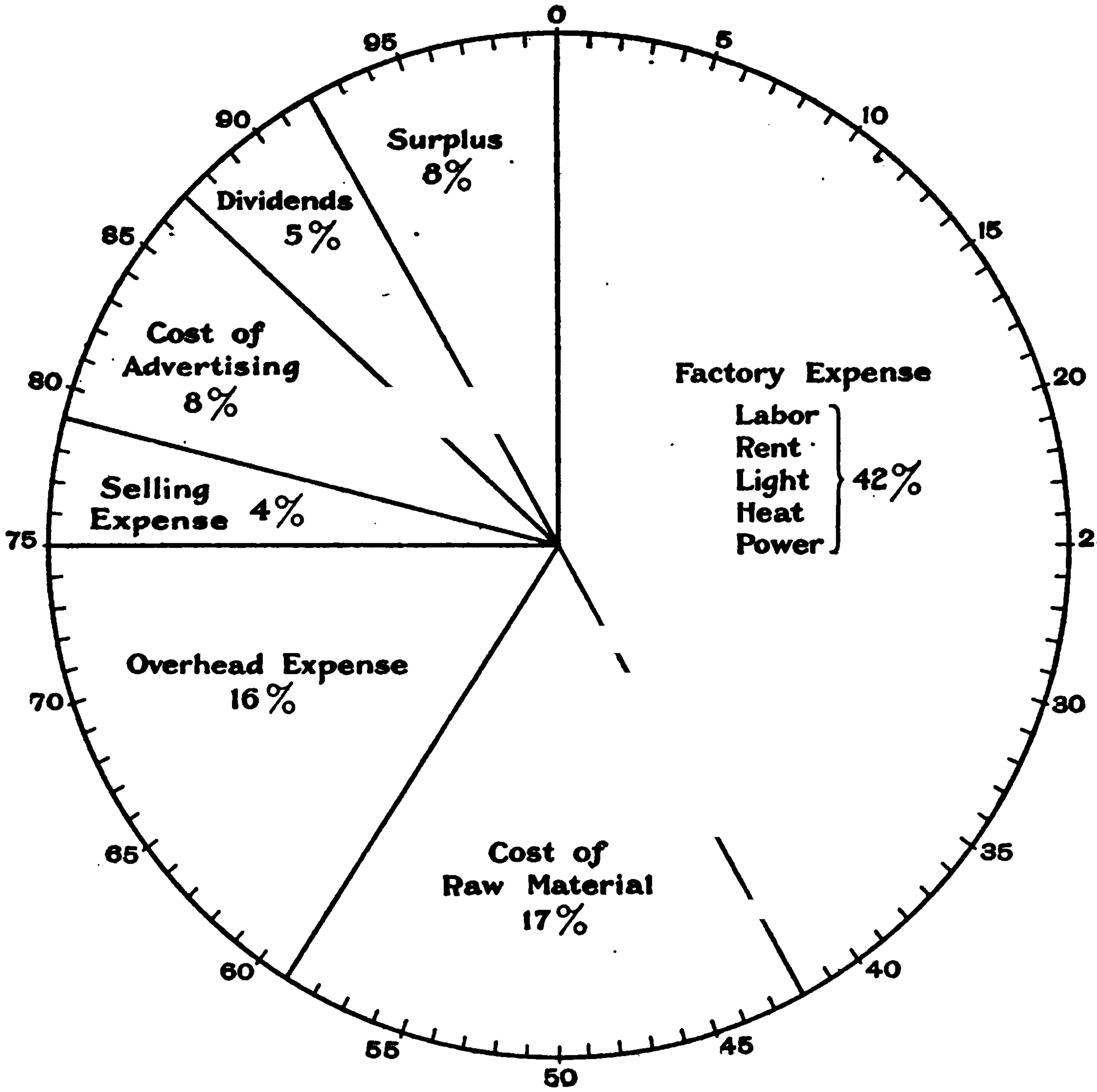


FIG. 11

14. Approximate Method of Preparing Graphs.—In case a protractor is not at hand, or if its use is not understood, an easy approximate method of laying out these graphs is to divide the circle into eighths. This can be done by first drawing a line through the center, cutting the circumference on each side; this will divide the circle into halves. Draw a line through the center, perpendicular to this first line, to divide the circle into quarters. Bisect two of the arcs, not diametrically opposite,

and draw lines from these points through the center cutting the circumference; this will divide the circle into eighths. When this is done proceed by the use of proportion, as when using the degrees, but instead of using 360 for the last extreme use 8. For example, using the same figures as: For department *1*, $65 : 170 = x : 8 = \frac{65 \times 8}{170} = 3$ of the $\frac{1}{8}$ spaces. For *2*, $70 : 170 = x : 8 = \frac{70 \times 8}{170} = 3\frac{1}{3}$ of the $\frac{1}{8}$ spaces. For *3*, $21 : 170 = x : 8 = \frac{21 \times 8}{170} = 1$ of the $\frac{1}{8}$ spaces. For *4*, $14 : 170 = x : 8 = \frac{14 \times 8}{170} = \frac{2}{3}$ of a $\frac{1}{8}$ section.

To prove, $3 + 3\frac{1}{3} + 1 + \frac{2}{3} = 8$ sections.

15. Use of Percentage.—Another plan is to divide the circle into one hundred parts, as in Fig. 11. The relation of each part of the business will then be found by dividing each item by the total business, thus reducing each item to its proper percentage; this will give the number of hundredths to lay off on the circumference. Lines are then drawn from these points to the center as shown.

16. Comparison by Circle Graphs.—If it is desired to show the net revenue with its factors for two or more periods, a circle of convenient size is taken for the base and other circles are made larger or smaller than this base circle in the same proportions as the net revenues for the different periods bear to one another.

C. P. A. QUESTIONS AND ANSWERS
(PART 1)

PRELIMINARY REMARKS

1. A number of questions taken from the C. P. A. examinations given in different states, have been fully worked out in preceding Sections. But as there is no better preparation for these examinations than a study of such questions and their answers these Sections are devoted entirely to this work. To get the greatest benefit, however, each question should be carefully studied and worked out before the published answer is studied. It is not necessary to use the exact forms of stating the answers shown here, but care should be taken that only the principles of correct accounting are used.

2. One of the benefits to be derived from a close study of such questions and answers as are given here is the training in analyzing the questions. Another benefit is the drill in assuming bases, or starting points, which must often be done in order that the questions may be answered at all, at least if the answers are to meet the ideas the examiner intended to be brought out.

All the questions given in these Sections, including those given in the Examination Questions, have been taken from C. P. A. examination papers of various states. They may, therefore, be considered typical questions and show the general methods adopted by the examining boards. The student who has familiarized himself with the principles and methods covered by the lessons up to this point will find no difficuly in working out these typical problems.

QUESTIONS AND ANSWERS

3. Question 1.—A, B, and C go into business as contractors on March 1, 1913, with assets as follows: Cash $1,520, plant and tools $1,550, stores $1,630. The investment of each is A, $2,000; B, $1,500; C, $1,200. The profits are to be divided equally. (*a*) From the following details construct a trial balance as at February 28, 1914:

Expenses	$ 550	Sales	$12,110
Wages	1,250	Plant and tools	1,550
Salaries	175	Stores	1,630
Rent	145	Cash	1,513
Purchases	8,350	Office furniture	200
Commissions paid on sales	78	Accounts receivable	2,750
Bad debts	35	Accounts payable	1,670
Discounts on purchases	20	Capital accounts March 1,	
Loan from C	1,000	1913, A	2,000
Drawings, A	570	Capital accounts, B	1,500
Drawings, B	400	Capital accounts, C	1,200
Drawings, C	304		

(*b*) Prepare a statement of income and expenditure. (*c*) Prepare a statement of receipts and disbursements. (*d*) Prepare a profit-and-loss account. (*e*) Prepare a balance sheet. (*f*) Prepare, in ledger form, the capital accounts of the partners.

MEMORANDA.—Accounts payable includes $250 wages and $100 expenses. Depreciate office furniture 10 per cent. Interest at 5 per cent. on capital and loan accounts for 1 year. Inventory, stores, February 28, 1914, $1,903; plant and tools, February 28, 1914, $1,550; accrued wages, February 28, 1914, $33; accrued expense, February 28, 1914, $50.

4. Answer to Question 1.—This is one of four questions that were required to be completed by candidates in 3½ hours. The question, though not difficult, requires a thorough grasp of accounts and the classification of details for satisfactory answer. The statement of receipts and disbursements has reference to the receipts and payments of cash. The statement of income and expenditures is practically identical with the profit-and-loss statement as it comprises the sales, purchases, expenses, etc.

The profit-and-loss account may contain the same information as the statement of income and expenditures. Assuming that the examining board may have required a specific division between these two statements, only such items are placed in the profit-and-loss account as pertain to the division of profits. A study of the exhibits will make the meaning clear and show the divisions referred to.

It will be noted that this is a partnership firm in the business of contracting, and that the information given pertains entirely to the first year's operation. The sales account represents the aggregate business done, while the purchases have reference to the material, stores, etc., purchased. As there are no contracts in operation, adjustments of process costs or partly earned profits are not necessary. The stores $1,630 are material and supplies on hand at the beginning; and this, together with the purchases $8,350, less the inventory of stores on hand at the closing $1,903, gives $8,077 as the amount used in the completion of contracts.

The loan from C may be treated the same as a loan from the bank, but since interest is accrued on it such interest should be credited to C's personal account, or else to interest accrued account. This interest is shown in the division of profits, but there is no objection to including it in the expenditures.

5. The capital accounts and personal accounts of the partners may be kept separate. At the time of closing, the capital accounts may remain intact, while personal drawings accounts may be used to show the profits and drawings. All items are adjusted into the capital accounts, in the accompanying analysis, in order to exhibit all the details necessary and to simplify the balance sheet. The accounts payable, $1,670, include wages and expenses, which amounts are separated therefrom in the balance sheet in order to present conditions in a true light. There is a difference between wages due and wages accrued, therefore they are separated in the statements. Interest on capital is not an expense of the business but a part of the profits, and it is so regarded in the profit-and-loss account. This interest is deducted from the net earnings, however, before

the final division of remaining profits is made. The profit-and-loss account shows the distribution of profits to partners at the date of closing. The six exhibits called for are as follows:

TRIAL BALANCE
FIRM OF A, B, AND C
YEAR ENDED FEBRUARY 28, 1914

Expenses	$ 550.00	
Wages	1,250.00	
Salaries	175.00	
Rent	145.00	
Purchases	8,350.00	
Commissions paid on sales	78.00	
Bad debts	35.00	
Discounts on purchases		$ 20.00
Loan from C		1,000.00
Drawings, A	570.00	
Drawings, B	400.00	
Drawings, C	304.00	
Sales		12,110.00
Plant and tools	1,550.00	
Stores	1,630.00	
Cash	1,513.00	
Furniture	200.00	
Accounts receivable	2,750.00	
Accounts payable		1,670.00
Capital account, A		2,000.00
Capital account, B		1,500.00
Capital account, C		1,200.00
	$19,500.00	$19,500.00

STATEMENT OF INCOME AND EXPENDITURE
FIRM OF A, B, AND C
YEAR ENDED FEBRUARY 28, 1914

INCOME			
Sales for year			$12,110.00
EXPENDITURES			
Stores on hand at beginning		$1,630.00	
Purchases	$8,350.00		
Less discounts	20.00		
	$8,330.00		
Less inventory at closing	1,903.00	6,427.00	
Cost of sales		$8,057.00	
Trade expenses	$ 550.00		
Wages	1,283.00		
Salaries	175.00		
Rent	145.00		
Commissions	78.00		
Bad debts	35.00		
Accrued expenses	50.00		
Depreciation on furniture and fixtures	20.00	2,336.00	
Total expenditure			10,393.00
Net profit from operations			$ 1,717.00

STATEMENT OF RECEIPTS AND DISBURSEMENTS

FIRM OF A, B, AND C

YEAR ENDED FEBRUARY 28, 1914

RECEIPTS OF CASH

Cash invested at March 1, 1913				$ 1,520.00
From accounts receivable			$9,325.00	
Loan from C			1,000.00	10,325.00
Total receipts				$11,845.00

DISBURSEMENTS OF CASH

Expenses			$ 450.00	
Wages			1,000.00	
Salaries			175.00	
Rent			145.00	
Purchases		$8,350.00		
Accounts payable	$1,670			
Wages and expenses	350	1,320.00		
		$7,030.00		
Discount		20.00	7,010.00	
Office furniture			200.00	
Commissions paid on sales			78.00	
Drawings, A's account			570.00	
Drawings, B's account			400.00	
Drawings, C's account			304.00	
Total disbursements				10,332.00
Cash balance, February 28, 1914				$ 1,513.00

PROFIT-AND-LOSS ACCOUNT

FIRM OF A, B, AND C

YEAR ENDED FEBRUARY 28, 1914

Net profit from operations		$1,717.00
From which deduct		
Interest on capital		
A, 5 per cent. on $2,000.00	$100.00	
B, 5 per cent. on $1,500.00	75.00	
C, 5 per cent. on $1,200.00	60.00	
Interest on loan from C		
5 per cent. on $1,000.00	50.00	285.00
Net balance for division		$1,432.00

Division of Profits

A, one-third	$ 477.34
B, one-third	477.33
C, one-third	477.33
	$1,432.00

NOTE—The interest on the loan from C is shown in the division of profits, but there is no objection to including it in the expenditures.

BALANCE SHEET

Firm of A, B, and C

Year Ended February 28, 1914

Assets		Liabilities and Capital		
Cash	$1,513.00	Accounts payable		$1,320.00
Accounts receivable	2,750.00	Wages due	$250.00	
Stores	1,903.00	Wages accrued	33.	
Office fixtures	180.00	Expenses due	100.00	
Plant and tools	1,550.00	Expenses accrued	50.00	433.00
		Loan from C		1,000.00
		Liabilities		$2,753.00
		A's capital	$2,007.34	
		B's capital	1,652.33	
		C's capital	1,483.33	
		Net worth of firm		5,143.00
	$7,896.00			$7,896.00

CAPITAL ACCOUNTS OF PARTNERS

Year Ended February 28, 1914

A's Account

Drawings	$ 570.00	Investment	$2,000.00
Balance	2,007.34	Interest	100.00
		Profit	477.34
	$2,577.34		$2,577.34
		Balance	$2,007.34

B's Account

Drawings	$ 400.00	Investment	$1,500.00
Balance	1,652.33	Interest	75.00
		Profit	477.33
	$2,052.33		$2,052.33
		Balance	$1,652.33

C's Account

Drawings	$ 304.00	Investment	$1,200.00
Balance	1,483.33	Interest	60.00
		Interest on loan	50.00
		Profit	477.33
	$1,787.33		$1,787.33
		Balance	$1,483.33

6. Question 2.—From the following trial balance and notations prepare a manufacturing-and-trading account, profit-and-loss account, and balance sheet as at December 31, 1914,

TRIAL BALANCE
GLOBE MANUFACTURING COMPANY
YEAR ENDED DECEMBER 31, 1914

Cash	$ 25,324.00	
Land	100,000.00	
Buildings	200,000.00	
Machinery	300,000.00	
Tools and implements	40,430.00	
Horses, wagons, and harness	30,000.00	
Office furniture	5,201.00	
Bills receivable	25,812.00	
Accounts receivable	163,374.00	
Investments	20,000.00	
Salesmen's accounts, advances on salaries	1,960.00	
Organization expenses $15,000, less 2 per cent	14,700.00	
Good-will	200,000.00	
Bills payable		$ 42,000.00
Accounts payable		98,511.00
Special accounts, officers and clerks		15,363.00
Reserve for bad debts, less accounts written off		112.00
Reserve for depreciation, buildings 2½ per cent		5,000.00
Reserve for depreciation, machinery 6 per cent		18,000.00
Reserve for depreciation, horses, wagons, etc. 10 per cent		3,000.00
Capital stock, 10,000 shares at $100		1,000,000.00
Sales, less returns and allowances		1,240,600.00
Rent of part of business premises		500.00
Inventory, December 31, 1913	104,621.00	
Purchases, including freight and cartage	395,662.00	
Labor, factory pay rolls	600,400.00	
Salaries of officers, clerical force	75,120.00	
Salaries of salesmen	60,440.00	
Advertising	50,300.00	
Taxes	4,020.00	
Insurance	2,600.00	
Interest and discount	6,500.00	
Expense, stable	4,000.00	
Expenses, office, legal, and unclassified	25,750.00	
Maintenance, repairs, buildings, etc.	26,942.00	
Profit and loss, 1913 surplus		60.070.00
	$2,483,156.00	$2,483,156.00

MEMORANDA.—Inventories, December 31, 1914, merchandise, finished and unfinished, $270,560; factory pay rolls, accrued but not paid, $5,750; unexpired insurance, $912; interest accrued on investments, $1,000.

which is the end of the second fiscal year of the company's operations. Make the same reserves for depreciation as were made at the end of the preceding year. Write off 10 per cent. from balance of organization expenses. Allow 2 per cent. of bills and accounts receivable as a provision against possible losses. Show the per cent. of gross profit and net profit. Show, as a final balance at the credit of undivided-profits account, the profits available for distribution.

7. **Answer to Question 2.**—This question is a fair sample of the kind of work the accountant is called on to do, though the information given in it is very brief, compared with the quantity of details that is to be found in an actual set of books. When the accountant has access to all accounts, etc. of the concern being examined, he can verify inventories, list properties on hand, and make a personal inspection of all details. When preparing revenue and financial statements, the accountant should remember that they are made to show results, and therefore should be arranged in the simplest manner possible without sacrificing clearness. There is no set rule to follow, however, so that the accountant is at liberty to follow the arrangement best suited to his individual needs.

8. The statements that follow are given as fair samples of the kind required by the question itself. In making analyses of accounts, accountants generally use working sheets or papers containing from six to twenty or more columns. This enables them to analyze and separate the various accounts into the columns under their respective classifications.

The items in the comparative percentage statement are taken to the nearest decimal of one place and illustrate the method of determining percentages. The *turnover* means the cost of goods sold $958,963; but as the exact cost of goods manufactured is so hard to determine, the sales are frequently used as a basis for percentage exhibits. Comparative statements are usually varied to meet the requirements of the management, and in some cases contain a considerable amount of information pertaining to the business of the current month and year as compared with last year.

MANUFACTURING AND TRADING ACCOUNT

GLOBE MANUFACTURING COMPANY

YEAR ENDED DECEMBER 31, 1914

Costs				Sales	
Inventory, January 1, 1914			$ 104,621.00	Sales, less returns and allowances	$1,240,600.00
Purchases and freight			395,662.00		
Labor			606,150.00		
			$1,106,433.00		
Less inventory, December 31, 1914			270,560.00		
First cost			$ 835,873.00		
Manufacturing and selling charges					
Maintenance, buildings and machinery		$26,942.00			
Taxes		4,020.00			
Insurance	$2,600.00				
Less unexpired	912.00	1,688.00			
Depreciation of					
Buildings, 2½ per cent.		5,000.00			
Machinery, 6 per cent.		18,000.00			
Horses and wagons, 10 per cent.		3,000.00	$ 58,650.00		
Stable expenses			4,000.00		
Salaries, salesmen			60,440.00		
Cost of sales			$ 958,963.00		
Gross profit carried to profit-and-loss account			281,637.00		
			$1,240,600.00		$1,240,600.00

PROFIT-AND-LOSS ACCOUNT
Globe Manufacturing Company
Year Ended December 31, 1914

Debits		Credits	
General expenses			
Salaries, Office	$ 75,120.00	Gross profit for trading account	$281,637.00
Advertising	50,300.00	Rent of part of premises	500.00
Interest and discount	6,500.00	Interest accrued on investments	1,000.00
Expenses, office and legal	25,750.00		
Reserve for bad debts, 2 per cent.	3,784.00		
Organization expenses 10 per cent.	1,470.00		
Total expenses	$162,924.00		
Net profit carried down	120,213.00		
	$283,137.00		$283,137.00
Balance of profits available for dividends	$180,283.00	Net profit brought down	$120,213.00
		Surplus profit from 1913	60,070.00
	$180,283.00		$180,283.00

BALANCE SHEET
Globe Manufacturing Company
Year Ended December 31, 1914

Assets		
Current assets		
Cash on hand		$ 25,324.00
Bills receivable	$ 25,812.00	
Accounts receivable	163,374.00	189,186.00
Merchandise, finished and unfinished		270,560.00
Investments		20,000.00
Interest accrued		1,000.00
Salesmen, advances		1,960.00
Total current assets		$ 508,030.00
Fixed assets		
Land	$100,000.00	
Buildings	200,000.00	
Machinery	300,000.00	
Tools and implements	40,430.00	
Horses, wagons, etc.	30,000.00	
Office furniture	5,201.00	
Total fixed assets		$ 675,631.00
Good-will		200,000.00
Insurance unexpired		912.00
Organization expenses	$ 14,700.00	
Less 10 per cent.	1,470.00	13,230.00
		$1,397,803.00

LIABILITIES

Current liabilities		
Bills payable	$42,000.00	
Accounts payable	98,511.00	$ 140,511.00
Special accounts		
Office and clerks		15,363.00
Wages accrued, factory pay roll		5,750.00
Total current liabilities		$ 161,624.00
Reserve accounts		
For bad debts	$ 3,896.00	
Depreciation of building	10,000.00	
Depreciation of machinery	36,000.00	
Depreciation of horses and wagons	6,000.00	55,896.00
Total liabilities		$ 217,520.00
Capital stock		1,000,000.00
Undivided profits		180,283.00
		$1,397,803.00

COMPARATIVE PERCENTAGE STATEMENT

GLOBE MANUFACTURING COMPANY

	Based on Sales			Based on Turnover		
	1914	1913	Increase (Black) Decrease (Red)	1914	1913	Increase Decrease
Gross profit..........	22.7	19.8	2.9	29.4		
Net profit............	9.7	8.5	1.2	12.5		
Labor, $606,150.......	48.8	36.4	2.4	63.2		
Expenses, $162,924....	13.13	11.43	1.7	17.0		

9. **Question 3.**—The Davison Company and the Lewis Company amalgamate under the name of The Davison-Lewis Company, with an authorized capital of $500,000, of which $200,000 is 7 per cent. preferred stock and the remaining $300,000 common stock. It is agreed that $100,000 preferred stock and $200,000 common stock shall be given for the Davison Company's business and $75,000 preferred stock and $75,000 common stock for the Lewis Company's business. It is also agreed that $3,000 common stock is to be allotted to A. Davison in consideration of his services in connection with the amalgamation. From the following balance sheets make the required entries in the books of the new company.

BALANCE SHEET

THE DAVISON COMPANY

Assets		Liabilities	
Cash	$ 3,000.00	Bills payable	$ 8,000.00
Book debts	5,000.00	Mortgage payable	12,000.00
Bills receivable	20,000.00	Accounts payable	2,000.00
Goods on hand	80,000.00	Capital stock	250,000.00
Machinery, etc.	60,000.00		
Real estate	104,000.00		
	$272,000.00		$272,000.00

THE LEWIS COMPANY

Assets		Liabilities	
Cash	$ 2,000.00	Bills payable	$ 8,000.00
Book debts	5,000.00	Capital stock	100,000.00
Bills receivable	15,000.00		
Machinery, etc.	56,000.00		
Goods on hand	30,000.00		
	$108,000.00		$108,000.00

10. Answer to Question 3.—The net assets of the Davison Company, as shown by its balance sheet, amount to $250,000. They are to transfer these assets for $300,000 in stock, consisting of $100,000 preferred and $200,000 common. The extra $50,000 stock issued in excess of the net assets must be charged to good-will. The complete entry will therefore be as follows:

Cash	$ 3,000.00	
Book debts	5,000.00	
Bills receivable	20,000.00	
Merchandise	80,000.00	
Machinery	60,000.00	
Real estate	104,000.00	
Good-will	50,000.00	
Bills payable		$ 8,000.00
Mortgage payable		12,000.00
Accounts payable		2,000.00
Davison Company		300,000.00

Assets and liabilities of the Davison Company taken over as per agreement of January 15, 1914.

Davison Company	$300,000.00	
Capital stock, preferred		$100,000.00
Capital stock, common		200,000.00

Stock issued to stockholders of Davison Company.

It will be noticed that the Capital-Stock Account must be divided in such a way as to keep preferred stock and common stock separate. Similarly, in the share ledger, separate accounts must be opened for preferred stockholders as distinguished from holders of common stock.

11. To bring the Lewis Company's net assets into the business the following entry must be made:

Cash	$ 2,000.00	
Book debts	5,000.00	
Bills receivable	15,000.00	
Machinery	56,000.00	
Goods	30,000.00	
Good-will	50,000.00	
Bills payable		$ 8,000.00
Lewis Company		150,000.00
Assets and liabilities of Lewis Company taken over as per agreement.		
Lewis Company	$150,000.00	
Capital stock, preferred		$ 75,000.00
Capital stock, common		75,000.00
Stock issued to stockholders of Lewis Company in accordance with agreement.		

12. Common stock amounting to $3,000 is issued to A. Davison in consideration of his services in bringing about the amalgamation. The preliminary expense should be charged with this and it may be carried temporarily as an asset, but if this is done it should be written down gradually so as to disappear entirely by the end of from 3 to 5 years. It may be entered as follows:

Preliminary expense	$3,000.00	
Capital stock, common		$3,000.00

After all of the foregoing entries have been posted, the accounts opened for the Davison Company and the Lewis Company should balance. Stock certificates of the new company will be issued to the shareholders of these respective concerns in proportion to their interests in the same, in place of the shares previously held by them, which are now surrendered. The opening balance sheet of the Davison-Lewis Company will be as follows:

BALANCE SHEET

THE DAVISON-LEWIS COMPANY

Assets		Liabilities	
Cash	$ 5,000.00	Bills payable	$ 16,000.00
Book debts	10,000.00	Mortgage payable	12,000.00
Bills receivable	35,000.00	Accounts payable	2,000.00
Merchandise	110,000.00	Capital stock, preferred	175,000.00
Machinery	116,000.00	Capital stock, common	278,000.00
Real estate	104,000.00		
Good-will	100,000.00		
Preliminary expenses	3,000.00		
	$483,000.00		$483,000.00

13. Question 4.—A manufacturing company requires a statement showing the outcome of 7 months' operations. It appears that by reason of manufacturing having been commenced while the plant and the power development were incomplete, frequent stoppages took place, so that the production was much below capacity, while the costs of production were abnormally high. Assuming actual running time at 4½ months net, what weight should be attached to these circumstances, the directors having asked that they be taken into account in determining the disposition of the following items:

Materials	$140,000.00
Pay roll, operatives	37,300.00
Pay roll, non-productive labor	18,250.00
Bond interest accrued	14,500.00
Salaries	7,265.00
Insurance	3,080.00
General expenses	1,150.00
Sales for period	182,400.00
Inventories of manufactured goods, at cost to produce	12,400.00

14. Answer to Question 4.—According to the question the company's output was actually manufactured in 4½ months of running time, although 7 months' wages and expenses were paid. If the auditor is satisfied as to the truth of the information given him in this respect, he is justified in preparing a statement that will show the normal profit in contrast with the actual profit. The gross expenses for the period outside of material were $81,545; of this amount only nine-fourteenths, or

$52,421.76, is the normal charge against the output for this period; the difference, $29,123.24, is the loss due to stoppages. The figures given in the statement as per question, show a loss of $26,745; the difference between these two loss amounts shows a profit for the period of $2,378.24, without taking into consideration the fact that under normal conditions the output would have been larger and the profit proportionately increased. With the proportionate increase of output, there would be for the 7 months a net profit of $3,699.42, as shown by the following statement:

In brief the points to be allowed for are (1) decrease of running expenses to a basis of 4½ months' time, which will give the net profit for 4½ months, or (2) the increase of output from the amount given in the question to the amount that would have been produced under normal conditions in 7 months. A simple calculation will show that the sales, instead of being $182,400, for 4½ months, or $40,533.33 for 1 month, would be $283,733.31 for 7 months, and that the inventories, instead of being $12,400, would have been $19,288.89. This would of necessity increase the cost of the material from $140,000 to $217,777.78. The first statement shown below is based upon the supposed normal conditions and show the normal net profit.

MANUFACTURING ACCOUNT

Debits		Credits	
Material	$217,777.78	Sales	$283,733.31
Total expenses as per question	81,545.00	Inventories	19,288.89
	$299,322.78		
Net profit	3,699.42		
	$303,022.20		$303,022.20

The statement constructed in such a way as to show the actual results for the period would appear as follows:

MANUFACTURING ACCOUNT

Debits		Credits	
Material	$140,000.00	Sales	$182,400.00
Total expense	81,545.00	Inventories	12,400.00
			$194,800.00
		Net loss	26,745.00
	$221,545.00		$221,545.00

15. Question 5.—On August 1, 1912, a loan company lends $4,000 at 6 per cent. per annum, compound interest, to be repaid in three equal annual instalments. The instalments are received on August 1, 1913, 1914, and 1915, respectively. Pass the necessary bookkeeping entries for the above through the loan company's journal and post to the ledger.

16. Answer to Question 5.—The compound amount of $4,000 at 6 per cent. per annum for 3 years is $4,764.06. To find the amount of each annual payment, the amount of the loan and the compound interest on it for the 3 years, $4,764.06, must be divided by the sum of the values of $1, paid at each stated time, plus the compound interest on that $1 from the date of payment to the due date of the loan and interest.

Each $1 paid at the end of the first year, with compound interest to the due date, which is 2 years away, will at that date amount to $1.1236. Each $1 paid at the end of the second year with interest to the due date will amount to $1.06. Each $1 paid at the due date is due then and cannot accumulate interest, so is worth $1. $1.1236+$1.06+$1.00=$3.1836. $4,764.06 ÷$3.1836=$1,496.44, the sum of each annual payment.

It is a comparatively easy matter to determine what part of each payment is interest and what part is principal. The interest on the entire loan at 6 per cent. for 1 year is $240; therefore, the first instalment of $1,496.44 consists of $240 interest and $1,256.44 principal, and a journal entry to correspond with these amounts must be made. There remains at the end of the first year $2,743.56 principal unpaid; the interest on this at 6 per cent. gives $164.61, which is the interest for the second year. Deducting this interest from the $1,496.44, which is the annual payment, gives $1,331.83, which is the amount paid on the principal the second year. There is now $1,411.73 of the original loan unpaid; the interest on this at 6 per cent. amounts to $84.71; together they make up the payment for the last year, thus proving the accuracy of the calculations.

17. Another proof can be made as follows: As the loan and interest is to be paid in three annual instalments there will

be a saving to the payer, in that the interest will not amount to so much as it would if the entire loan were allowed to run the 3 full years. $4,000 compounded at 6 per cent. for 3 years amounts to $4,764.06. By making three annual payments of $1,496.44, the $4,000 is returned with $489.32 interest, saving the payer $274.74 in interest. The first payment consists of $1,253.43 principal and $240 interest; the second of $1,328.64 principal and $164.79 interest; the third of $1,417.93 principal and $85.17 interest. If the first payment of $1,496.44 were kept the remaining 2 years, it would earn $184.95 in interest. If the second payment of $1,496.44 had been kept the remaining year, it would have earned $89.79 interest. $184.95+$89.79 =$274.74, the amount shown as saved by the payer.

18. The journal entries must be made in such a way as will credit Interest Account for the amount of interest accruing due each year, otherwise the proper interest earnings on the company cannot be shown. After charging up the account representing the original loan with the $4,000 cash, an entry should be made charging it with the $240 due at the end of the first year. When payment is made, the Loan Account is credited for the amount of same; this process is continued throughout the 3 years. The entries are shown below:

JOURNAL ENTRIES

Loan account	$4,000.00	
Cash		$4,000.00
When loan is made		
Loan account	240.00	
Interest		240.00
Interest due at end oi first year		
Cash	1,496.44	
Loan account		1,496.44
First annual payment		
Loan account	164.61	
Interest		164.61
Interest due at end of second year		
Cash	1,496.44	
Loan account		1,496.44
Second annual payment		
Loan account	84.71	
Interest		84.71
Interest due at end of third year		
Cash	1,496.44	
Loan account		1,496.44

19. A glance at the ledger entries, given below, will show that the net result of the whole transaction is that the loan company's cash account is $489.32 greater, which amount has been paid as interest on the loan.

LEDGER ENTRIES

LOAN ACCOUNT

Debits		Credits	
Cash	$4,000.00	Cash	$1,496.44
Interest	240.00	Cash	1,496.44
Interest	164.61	Cash	1,496.44
Interest	84.71		
	$4,489.32		$4,489.32

INTEREST

Debits		Credits	
Balance	$489.32	Loan account	$240.00
		Loan account	164.61
		Loan account	84.71
	$489.32		$489.32
		Balance	$489.32

CASH

Debits		Credits	
Loan account	$1,496.44	Loan account	$4,000.00
Loan account	1,496.44	Balance	489.32
Loan account	1,496.44		
	$4,489.32		$4,489.32
Balance	$ 489.32		

20. Question 6.—D. Hamilton and W. Jackson purchased a hotel business for $40,000, the former investing $16,000 and the latter the remainder, and agreed to share profits and losses in these proportions. The business has two distinct branches, one of which is taken charge of by Hamilton and the other by Jackson. Each keeps separate account of his receipts and disbursements for the term of the partnership. Hamilton's total receipts were $40,910.15, and Jackson's $37,201.19; Hamilton's disbursements were $50,912.24, and Jackson's $29,870.15. At the end of the period the business was sold for $53,700, of which $30,000 was received in cash and banked to their joint credit.

A note of $23,700 was taken for the balance and then afterwards transferred to Hamilton at a discount of 10 per cent. on its face. A final settlement is then made, and each received a check for his share of the $30,000. Find the amount of the respective checks.

21. Answer to Question 6.—Make the following entry to credit each partner for his investment:

Cash	$40,000.00	
D. Hamilton		$16,000.00
W. Jackson		24,000.00

The purchase of the business for $40,000, at the time it was done, doubtless required a number of entries, but for the purpose of this question the following entry is sufficient:

Business	$40,000.00	
Cash		$40,000.00

As each partner personally controls and is responsible for the receipts and disbursements of a certain part of the business from its commencement until the date of settlement, each must be debited for the cash receipts retained by him and credited for the disbursements made by him, and as these receipts and disbursements are on account of the business itself they must go to the credit and debit, respectively, of business account.

D. Hamilton	$40,910.15	
Business		$40,910.15
Business	50,912.24	
D. Hamilton		50,912.24
W. Jackson	37,201.19	
Business		37,201.19
Business	29,870.15	
W. Jackson		29,870.15

The business was sold for $53,700, of which $30,000 was received in cash and a note of $23,700 for the balance, therefore the following entry is necessary:

Cash	$30,000.00	
Bills receivable	23,700.00	
Business		$53,700.00

As the note is disposed of to Hamilton at a discount of 10 per cent., Business Account should be charged with the $2,370 and D. Hamilton for the balance as follows:

Business	$ 2,370.00	
D. Hamilton	21,330.00	
Bills receivable		$23,700.00

The foregoing entries when posted will produce, without including the investment entries, the following statement:

	DR.	CR.
D. Hamilton	$ 11,327.91	
W. Jackson	7,331 04	
Business	83,152.39	$131,811.34
Cash	30,000.00	
	$131,811.34	$131,811.34

The foregoing shows that the business has produced $48,658.95, of which sixteen-fortieths or two-fifths must go to the credit of Hamilton and the remainder to the credit of Jackson as follows:

Business	$48,658.95	
D. Hamilton		$19,463.58
W. Jackson		29,195.37

This when posted will leave Hamilton's account with a net credit of $8,135.67 and Jackson's with a net credit of $21,864.33. It will be noticed that these amounts represent the net capital of each partner and exist in the form of $30,000 cash. Each one is of course entitled to his net capital, the entry required being as follows:

D. Hamilton	$ 8,135.67	
W. Jackson	21,864.33	
Cash		$30,000.00
Jackson	$24,000.00	
Hamilton	16,000.00	
Business		$40,000.00

This entry when posted will balance all of the accounts.

22. **Question 7.**—A is the owner of a business, the balance sheet of which is here shown. B and C are admitted as equal partners with A upon each putting into the business $30,000 cash and each paying A personally $18,000 cash. Show the balance sheet of the new firm on commencing business.

BALANCE SHEET

Assets		Liabilities	
Stock in trade	$50,000.00	Creditors	$10,000.00
Cash	12,000.00	A, capital	70,000.00
Building	15,000.00		
Book debts	3,000.00		
	$80,000.00		$80,000.00

23. **Answer to Question 7.**—The balance sheet shows A's net capital to be $70,000, but as B and C put into the con-

cern $30,000 each, the tangible net assets of the business are raised to $130,000, of which one-third, or $43,333.33⅓, belongs to each partner. Provided the firm does not wish to raise a good-will account, the $36,000 cash paid to A personally will not affect the question and the new balance sheet will appear as follows:

BALANCE SHEET

Assets		Liabilities	
Stock in trade	$ 50,000.00	Creditors	$ 10,000.00
Cash	72,000.00	A, capital	43,333.33⅓
Building	15,000.00	B, capital	43,333.33⅓
Book debts,	3,000.00	C, capital	43,333.33⅓
	$140,000.00		$140,000.00

24. Under the circumstances, however, the new firm will be justified in opening a good-will account. Each of the new partners has paid $48,000 in cash for a one-third interest in the new business. It is plain, therefore, that on the same basis of valuation the whole business is worth $144,000, of which $130,000 consists of the tangible net assets that represented the aggregate of the capital accounts in the foregoing balance sheet. The other $14,000 is the value of the good-will, and an account may accordingly be opened for it. The good-will valuation may also be obtained by comparing the amount paid for a one-third interest in the business; namely $48,000, with the $43,333.33⅓ shown in the foregoing balance sheet to be each one's share in the business. The difference, $4,666⅔, is evidently the amount paid by the purchaser for his share in the good-will. The total value of good-will will, therefore, be three times this amount, or $14,000. Under these circumstances the balance sheet will appear as follows:

BALANCE SHEET

Assets		Liabilities	
Stock in trade	$ 50,000.00	Creditors	$ 10,000.00
Cash	72,000.00	A, capital	48,000.00
Building	15,000.00	B, capital	48,000.00
Book debts	3,000.00	C, capital	48,000.00
Good-will	14,000.00		
	$154,000.00		$154,000.00

25. Question 8.—The ledger of the firm of Cutter & Fitler, retail dealers in men's clothing and furnishings, showed the following balances on December 31, 1912:

	Dr.	Cr.
Cash	$ 2,896.14	
Accounts receivable	28,226.06	
Bills receivable	1,650.00	
Furniture and fixtures	6,344.92	
Accounts payable		$ 12,518.30
Bills payable		5,598.66
Inventory, January 1, 1912		
Clothing department	12,689.54	
Shoe department	5,219.78	
Haberdashery department	4,711.44	
Purchases		
Clothing department	36,148.83	
Shoe department	15,291.34	
Haberdashery department	12,680.27	
Sales		
Clothing department		54,723.57
Shoe department		23,107.82
Haberdashery department		18,560.26
Wages		
Clothing department	2,867.50	
Shoe department	1,324.80	
Haberdashery department	987.65	
General expenses	1,834.19	
Office salaries	1,450.00	
Rent	3,000.00	
Taxes	782.96	
Insurance	387.39	
Bad debts	463.28	
Amos Cutter, capital account		20,000.00
Hiram Fitler, capital account		10,000.00
Amos Cutter, withdrawal account	3,701.68	
Hiram Fitler, withdrawal account	1,850.84	
	$144,508.61	$144,508.61

Inventories on December 31, 1912, are as follows:

Clothing department	$14,466.23
Shoe department	4,913.62
Haberdashery department	5,028.96

Prepayments on that date are:

Taxes	$168.22
Insurance	57.30

There are no accrued liabilities. Depreciation of 10 per cent. is to be written off from furniture and fixtures. Each partner is to be credited with 6 per cent. interest on his capital. No interest is to be charged on partners' withdrawals. Net profit

or loss is to be divided in the proportion: Cutter, two-thirds; Fitler, one-third. Prepare the following: Trading account for each department, profit-and-loss account, capital account of each partner, balance sheet.

26. First Answer to Question 8.—There is no established method of keeping departmental accounts, as each store is likely to use the plan suited to its own particular needs or in accordance with the ideas of the managers. It seems desirable, to say the least, to keep the accounts in such a way as will exhibit the income and expenses of each department and the net profit resulting from trading; especially is this true if the entire store is entirely subdivided into departments. To provide this information requires, of course, that the general and overhead expenses shall be apportioned to the different departments in some equitable manner; for example, in proportion to floor space, to the gross sales, to the wages paid, to the gross profit, or according to some other prearranged plan.

APPORTIONMENT OF PROFITS

Debits			Credits	
Cutter			Net profit	$20,552.52
Interest on capital	$ 1,200.00			
Net profit, two-thirds	12,501.68	$13,701.68		
Fitler				
Interest on capital	$ 600.00			
Net profit, one-third	6,250.84	6,850.84		
		$20,552.52		$20,552.52

Another plan is to disregard the apportionment of expenses to departments and to use only the direct charges, as purchases; freight inbound and wages; these would be set up against the sales and the resulting balance after deducting inventories would exhibit the gross departmental profit. The gross profits are then carried to the credit of the general profit-and-loss account, and the profit-and-loss account is then charged with all of the general and administrative expenses. The resulting balance must, of course, be the net profit or net loss. This

seems to be the plan required by the problem under consideration, but for illustrative purposes both plans are shown. The manner of showing interest on capital should be noted; it has been regarded as part of the profits and not an operating expense.

CAPITAL ACCOUNTS

Cutter's Account

Debits		Credits	
Withdrawals	$ 3,701.68	Investment	$20,000.00
Balance, net worth	30,000.00	Interest on capital	1,200.00
		Two-thirds net profit	12,501.68
	$33,701.68		$33,701.68
		Balance, net worth	$30,000.00

Fitler's Account

Debits		Credits	
Withdrawals	$ 1,850.84	Investment	$10,000.00
Balance, net worth	15,000.00	Interest on capital	600.00
		One-third net profit	6,250.84
	$16,850.84		$16,850.84
		Balance, net worth	$15,000.00

BALANCE SHEET

Cutter & Fitler

At Close of Business, December 31, 1912

Assets

Cash		$ 2,896.14
Bills receivable		1,650.00
Accounts receivable		28,226.06
Prepaid taxes		168.22
Prepaid insurance		57.30
Furniture and fixtures	$ 6,344.92	
Less 10-per-cent. depreciation	634.49	5,710.43
Inventories		
Clothing department	$14,466.23	
Shoe department	4,913.62	
Haberdashery department	5,028.96	24,408.81
Total assets		$63,116.96

Liabilities and Capital

Accounts payable		$12,518.30
Bills payable		5,598.66
Total liabilities		$18,116.96
Capital		
Amos Cutter	$30,000.00	
Hiram Fitler	15,000.00	
Net worth of firm		45,000.00
		$63,116.96

27. The capital accounts of the partners after placing therein the withdrawals and profits are as here shown. Sometimes the withdrawals and profits are contained only in the proprietor's account, in which case the capital account contains only the investment and remains untouched.

28. **Second Answer to Question 8.**—The following plan is very much along the line already explained, apportioning expenses to the various departments. This method is interesting and represents another idea of apportioning expenses and general charges. The bad debts and depreciation might have been apportioned also to departments, but then there would have been no use for a profit-and-loss account, which is required by the question. The interest on capital is regarded as a general expense. The balance-sheet and capital accounts are practically the same as the ones already shown, and therefore need not be given again.

DEPARTMENT TRADING ACCOUNTS
CUTTER & FITLER
FOR YEAR ENDED DECEMBER 31, 1912

CLOTHING DEPARTMENT

Inventory, January 1, 1912	$12,689.54	Sales	$54,723.57
Purchases	36,148.83	Inventory, December 31, 1912	14,466.23
Wages	2,867.50		
Balance, gross profit	17,483.93		
	$69,189.80		$69,189.80

SHOE DEPARTMENT

Inventory, January 1, 1912	$ 5,219.78	Sales	$23,107.82
Purchases	15,291.34	Inventory, December 31, 1912	4,913.62
Wages	1,324.80		
Balance, gross profit	6,185.52		
	$28,021.44		$28,021.44

HABERDASHERY DEPARTMENT

Inventory, January 1, 1912	$ 4,711.44	Sales	$18,560.26
Purchases	12,680.27	Inventory, December 31, 1912	5,028.96
Wages	987.65		
Balance, gross profit	5,209.86		
	$23,589.22		$23,589.22

PROFIT-AND-LOSS ACCOUNT

CUTTER & FITLER

FOR YEAR ENDED DECEMBER 31, 1912

Debits		Credits	
General expenses	$ 1,834.19	Gross profit from	
Office salaries	1,450.00	Clothing department	$17,483.93
Rent	3,000.00	Shoe department	6,185.52
Taxes, net	614.74	Haberdashery department	5,209.86
Insurance, net	330.09		
Bad debts written off	463.28		
Depreciation of furniture and fixtures	634.49		
Total	$ 8,326.79		
Net profit	20,552.52		
	$28,879.31		$28,879.31

29. This question calls for a trading account for each department. But as the salaries, expenses, rents, and taxes are given as a whole, without reference to the amount that is to be charged to each department, it is necessary to assume that the expenses shall be apportioned in the ratio of the business as a whole that the volume of business bears to the total expense. It is therefore probable that a just division of the expense given should be shown as follows: Clothing department, one-half; shoe department, one-third; haberdashery department, one-sixth. The amounts as shown on the ledger are as follows:

	TAXES	INSURANCE	EXPENSE	SALARIES	RENTS
Amounts	$782.96	$387.39	$1,834.19	$1,450.00	$3,000.00
Prepaid	168.22	57.30			
	$614.74	$330.09	$1,834.19	$1,450.00	$3,000.00

A proportionate part of this charged to each department is as follows:

DEPARTMENTS

	CLOTHING	SHOE	HABERDASHERY	TOTAL
Taxes	$ 307.37	$ 204.91	$ 102.46	$ 614.74
Insurance	165.04	110.03	55.02	330.09
Expenses	917.11	611.39	305.69	1,834.19
Salaries	725.00	483.34	241.66	1,450.00
Rents	1,500.00	1,000.00	500.00	3,000.00
	$3,614.52	$2,409.67	$1,204.83	$7,229.02

RECAPITULATION

Amounts		Apportionment	
Taxes	$ 614.74	Clothing department, one-half	$3,614.52
Insurance	330.09	Shoe department, one-third	2,409.67
Expenses	1,834.19	Haberdashery department, one-sixth	1,204.83
Salaries	1,450.00		
Rents	3,000.00		
	$7,229.02		$7,229.02

DEPARTMENT TRADING ACCOUNTS
Cutter & Fitler
For Year Ended December 31, 1912

Clothing Department

Section 1

Inventory, January 1, 1912	$12,689.54	Sales	$54,723.57
Purchases	36,148.83	Inventory, December 31, 1912	14,466.23
Wages	2,867.50		
Balance, gross profit	17,483.93		
	$69,189.80		$69,189.80

Section 2

Expenses	$ 917.11	Gross profit	$17,483.93
Salaries	725.00		
Taxes	307.37		
Insurance	165.04		
Rents	1,500.00		
Balance, net profit	13,869.41		
	$17,483.93		$17,483.93

Shoe Department

Section 1

Inventory, January 1, 1912	$ 5,219.78	Sales	$23,107.82
Purchases	15,291.34	Inventory, December 31, 1912	4,913.62
Wages	1,324.80		
Balance, gross profit	6,185.52		
	$28,021.44		$28,021.44

Section 2

Expenses	$ 611.39	Gross profit	$6,185.52
Salaries	483.34		
Taxes	204.91		
Insurance	110.03		
Rents	1,000.00		
Balance, net profit	3,775.85		
	$6,185.52		$6,185.62

HABERDASHERY DEPARTMENT

Section 1

Inventory, January 1, 1912	$ 4,711.44	Sales	$18,560.26
Purchases	12,680.27	Inventory, December 31, 1912	5,028.96
Wages	987.65		
Balance, gross profit	5,209.86		
	$23,589.22		$23,589.22

Section 2

Expenses	$ 305.69	Gross profit	$5,209.86
Salaries	241.66		
Taxes	102.46		
Insurance	55.02		
Rents	500.00		
Balance, net profits	4,005.03		
	$5,209.86		$5,209.86

PROFIT-AND-LOSS ACCOUNT

CUTTER & FITLER

JANUARY 1 TO DECEMBER 31, 1912

Bad debts written off	$ 463.28	Net profit from trading accounts	
Interest on $20,000; 6 per cent. Cutter's capital	1,200.00	Clothing department	$13,869.41
Interest on $10,000; 6 per cent. Fitler's capital	600.00	Shoe department	3,775.85
10 per cent. depreciation, $6,344.92, furniture and fixtures	634.49	Haberdashery department	4,005.03
Balance, net profit for distribution	18,752.52		
	$21,650.29		$21,650.29

30. Question 9.—A single-entry set of books for 1912 is sent to you with an order to state a profit-and-loss account for the year and a balance sheet at December 31. The starting capital was $34,500.

Accounts receivable, January 1,	$26,500.00;	December 31,	$44,000.00
Accounts payable, January 1,	7,500.00;	December 31,	9,750.00
Merchandise, January 1,	8,500.00;	December 31,	9,500.00
Plant and machinery, January 1,	10,000.00;	December 31,	10,000.00
Furniture and fixtures, January 1,	700.00;	December 31,	700.00

A summary of the cash book for the year shows as follows:

Received	
Accounts receivable	$30,000.00
Capital paid in	2,500.00
Disbursed	
Bank overdraft, January 1	3,700.00
Accounts payable	12,500.00
General expense	5,000.00
Wages	7,750.00
Personal account	1,500.00

Leaving a bank account of $2,000, and currency on hand $50.

Provide 5 per cent. interest on capital disregarding additions during the year and personal drafts, deducting 10 per cent. for plant and machinery depreciation, 5 per cent. for furniture and fixtures, and 5 per cent. for bad-debts reserve.

31. Answer to Question 9.—At first glance this problem may seem to be very simple, but a close study will show that it is not. Many concerns are still using a single-entry system, or one that is so called, because it requires less work than the double entry. The purely single-entry set of books keeps record only of personal accounts, but the desire for more details has gradually broadened the bookkeeping system into a compromise between the single- and the double-entry system, and is neither one nor the other.

Even without the trial balance, certain nominal accounts may be kept very accurately, so that required details may be available for use in financial statements. All accounts may or may not be kept in the general ledger, but if not they can usually be compiled from the cash-book entries and from other sources. In the example under consideration, the assets and liabilities at beginning and ending are stated, so that the net worth at each period can be readily determined. This is illustrated in the two balance sheets shown herewith. The net capital on January 1, 1912, was $34,500 and on December 31, it was increased to $53,265. The business is evidently that of an individual trader, and interest on investment is seldom considered unless there are two or more partners to share in the division of profits. Following are the balance sheets just referred to, the latter containing an analysis of the capital account.

BALANCE SHEETS

BEGINNING OF YEAR, JANUARY 1, 1912

Assets		Liabilities	
Accounts receivable	$26,500.00	Accounts payable	$ 7,500.00
Merchandise	8,500.00	Bank overdraft	3,700.00
Plant and machinery	10,000.00	Capital	34,500.00
Furniture and fixtures	700.00		
	$45,700.00		$45,700.00

END OF YEAR, DECEMBER 31, 1912

Assets		Liabilities		
Accounts receivable	$44,000	Accounts payable		$ 9,750
Merchandise	9,500	Reserves for		
Plant and machinery	10,000	Depreciation	$ 1,035	
Furniture and fixtures	700	Bad debts	2,200	3,235
Cash	2,050	Capital		
		Balance, Jan. 1	$34,500	
		Additional investment	2,500	
		Interest on capital	1,725	
		Net profit	16,040	
		Total	$54,765	
		Less drawings	1,500	53,265
	$66,250			$66,250

In order to prepare a statement of assets and liabilities (balance sheet is not a desirable term to use in connection with a single-entry system), it is necessary to take inventories and to compile from various sources all of the assets and liabilities of the concern. When this has been done, the net worth can readily be determined and the net profit for a given period can be obtained by a comparison of the net capital at the beginning and the end thereof, as is shown in the statements given herewith. Then by a consideration of drawings, additional investments, etc., the actual net profit can be stated.

32. The question asks for a profit-and-loss account, but as many of the expense items are given it remains to determine the purchases and sales on the plan here illustrated. If there have been cash purchases and sales during the year, they can be obtained by an inspection of the cash book.

DETERMINING THE SALES FOR 1912

Accounts receivable, December 31, 1912	$44,000.00
Collections during year	30,000.00
Total	$74,000.00
Less accounts receivable, as on January 1, 1912	26,500.00
Balance, sales for year	$47,500.00

DETERMINING THE PURCHASES FOR 1912

Accounts payable, end of year	$ 9,750.00
Payments on account during year	12,500.00
Total	$22,250.00
Less accounts payable, January 1, 1912	7,500.00
Balance, purchases for year	$14,750.00

When the purchases and sales are known, the profit-and-loss account can readily be compiled from data submitted by the examiners. It is here stated in three divisions, but one or two divisions would no doubt have served the purpose. Attention is called to the fact that interest on capital is considered as a part

PROFIT-AND-LOSS ACCOUNT

FOR YEAR ENDED DECEMBER 31, 1912

Debits		Credits	
Inventory, January 1, 1912	$ 8,500.00	Sales for year	$47,500.00
Purchases for year	14,750.00		
	$23,250.00		
Less inventory, December 31	9,500.00		
Cost of sales	$13,750.00		
Gross profit carried down	33,750.00		
	$47,500.00		$47,500.00
General expense	$ 5,000.00	Gross profit brought down	$33,750.00
Wages	7,750.00		
Depreciation of			
Plant and machinery	1,000.00		
Furniture and fixtures	35.00		
Reserve for bad debts	2,200.00		
	$15,985.00		
Net profit	17,765.00		
	$33,750.00		$33,750.00
Profits apportioned			
Interest on capital	$ 1,725.00	Net profit brought down for apportionment	$17,765.00
Balance on net profit for division	16,040.00		
	$17,765.00		$17,765.00

of the profits and not as an expense of the business. A cash account for the year can now be compiled easily from the details given. The profit-and-loss account called for in the question is shown on page 31.

33. Question 10.—A manufacturing company, owning many patents and constantly acquiring new ones, some by way of outright purchase and about an equal number being taken out as the result of the efforts of its own experimental department, asks you to outline the best method of dealing with this account, having in mind the ascertainment of costs of manufacture and the annual balance sheet that is submitted to stockholders and to the general public. Outline fully your views on this subject.

34. Answer to Question 10.—Instead of buying all of its patents from others, the company decides to hire competent workmen and maintain an experimental department, wherein new inventions are devised, completed, tested, and patented. In every case, however, whether the patent is purchased or taken out by the company itself, there is always the probability of its being superseded or rendered obsolete by a later and more suitable invention, thereby necessitating its abandonment for the more desirable article. Now, whether the company buys its patents from others or gets them out itself as a result of work in its experimental department, there is usually considerable outlay in connection therewith.

35. All patents purchased of others should be charged to patents account at the cost price thereof. A like disposition should be made of subsequent charges, expenses of protective litigation, and the cost of securing patent assignments and shop rights from other persons. Such costs should be absorbed by annual depreciation charges during the life of the patents. An average amount could be assumed where there are several patents costing different amounts and having varying years of maturity, being careful to allocate the heavier portion to the earlier years of the patent. All patents acquired or taken out should be recorded separately in a book or on cards designed for that purpose, with appropriate addenda for any values attaching

to matured or obsolete patent rights. It is true that many patents have a considerable value, even after maturity, which might be worth considering, but in that case a revaluing or appraisement could be made. Speaking generally, it is better to write off all patents during their legal existence. The accounts will contain the following:

PATENTS ACCOUNT

Debit with	Credit with
The cost of patents acquired by purchase	The sale or transfer of any patents previously charged thereto
Subsequent charges for protecting the patents	Depreciation of patents based on time they have to run or on some other safe basis and charged to production costs
The cost of securing assignments and shop rights	Obsolete or worthless patents charged off to profit-and-loss account
The cost of patents obtained in the experimental department	Balance, being the net cost or book value of patents owned

36. Charge the experimental department with all expenditures in connection therewith for cost of equipment, maintenance, salaries, cost of securing patent rights, etc. This might even be included in the patents account, or an account might be maintained and called patents-and-experimental account. Because the annual cost of this department will be practically the same, or increasing if anything, and because it is maintained by the management without any assurance of lasting results, it would seem advisable to charge the entire running expenses thereof to profit and loss. This would include a reasonable depreciation on equipment. The cost of maintenance may, of course, be offset by returns from the sale of patents or rights, or from royalties received. It should also be credited with patents taken out and charged to patents account. The value placed upon such patents should be determined by appraisement or by the estimated cost to produce them; or it may be based upon the royalty income that would be derived from such an invention. In order, however, that the annual charge to patents account may not fluctuate too severely, it would seem good practice to capitalize a part of the experimental outlay from year to year. This could be retained in the

experimental-department account or else be charged to patents account; the remainder should be charged to profit and loss. The account may appear as follows:

EXPERIMENTAL DEPARTMENT

Debit with	Credit with
Cost of equipment at time of purchase	Sale of patent rights or income from royalties, etc.
Cost of maintenance	Value of patents charged to patents account
Salaries and expenses	Depreciation of equipment charged to profit-and-loss account
Cost of securing patent rights	Inventory at end of year, carried down
	Balance charged to profit-and-loss account

37. The book value or appraised value of patents and equipment of the experimental department should appear in the balance sheet. They should be listed about as follows: Patents and patent rights; experimental-department equipment. The second item might even include a certain amount of the maintenance expenses if it is deemed advisable, providing such expenses can be safely appraised. Indeed, some of the patents secured through the department may not prove valuable enough to justify their being included among the assets. Instead of including patent rights singly, they are frequently included with some other account, as good-will, patents, etc., or as patents and good-will. Sometimes, they are permitted to remain in such accounts without depreciation, but that is not a wise plan to adopt. These deductions for depreciation are generally handled through the loss-and-gain account; though, sometimes, they are charged to manufacturing expense, but seldom, if ever, are they treated as reserves. It seems advisable, in any case, to understate the value of assets rather than to adopt an opposite course.

38. Question 11.—Messrs. Brown & Wilson have applied to the Pennsylvania National Bank for a loan of $20,000, and have submitted the accompanying profit-and-loss account and balance sheet. The bank desires an opinion as to the advisability of making the loan and as to the form in which the accounts are presented.

PROFIT-AND-LOSS ACCOUNT
FOR YEAR ENDED JUNE 30, 1912

Stock at July 1, 1911	$ 50,000.00
Purchases	40,000.00
Wages and salaries	8,000.00
Office expenses	7,000.00
Miscellaneous expenses	15,000.00
Interest on loans	2,700.00
Bad debts	800.00
Profit	37,000.00
	$160,500.00
Sales, less returns	80,000.00
Stock at June 30, 1912	75,000.00
Dividends on investments	5,500.00
	$160,500.00

BALANCE SHEET
YEAR ENDED JUNE 30, 1912

Assets		
Book debts		$250,000.00
Stock as per inventory		75,000.00
Investments at cost		50,000.00
Good-will		10,000.00
Lease of premises		5,000.00
Furniture		1,000.00
Cash		500.00
		$391,500.00
Liabilities		
Trade creditors		$344,500.00
Loans		27,000.00
Partners' capital at July 1, 1911	$ 8,000.00	
Profit for year	37,000.00	
	$45,000.00	
Less drawings during year	25,000.00	20,000.00
		$391,500.00

39. Answer to Question 11.—The well-equipped bank of today has its credit department in which applications for loans are carefully scrutinized. The head of this department is known by some official title as credit man, assistant cashier, or vice-president. The credit man may, of course, make a careful analysis of the statement presented, and even have additional information from the borrower to substantiate its validity, but only an examination of the accounts will determine whether or not the figures presented are true and conservative. Such an examination must be made by some one fully competent to perform the work. In this respect, the certified public accountant can be of valuable assistance to the credit man, as is

evidenced in the question under consideration. Without making an examination of the books, it is impossible to give a correct opinion as to whether or not the loan of $20,000 should be made; in this case, therefore, it is necessary to assume such conditions as would ordinarily be determined by an actual examination of the accounts.

There are many things in the statement submitted that make it seem inadvisable to make the loan, and unless there are good personal reasons, such as the standing and connections of the partners, there is not much to favor an affirmative report. If, however, the investments, amounting to $50,000, could be turned over as security, there would be no question whatever regarding its allowance, provided the securities are as valuable as represented. Banks usually require that the quick assets be at least twice the amount of the loan, but in this case the margin is far from the desired ratio. The loan of $27,000 already outstanding must no doubt be satisfied first, and possibly it is secured by the collateral. The amount owing to trade creditors is beyond all reason. One must be careful in an examination of a business to see that all liabilities are included, and that the assets given are not overstated or overvalued. The personal accounts receivable and payable are entirely too large when compared with the firm's somewhat paltry capital and the volume of business transacted. The capital 1 year ago was $8,000 and now it is $20,000 with interim drawings of $25,000 against profits. This amount should have been left in the business, as its withdrawal indicates an apparent wilful attempt to use the firm for personal gain.

40. The profit-and-loss account should be presented in such a way as to show the cost of goods sold, the gross profit, and the net profit, as indicated in the account here shown. It will be seen that the cost of goods sold is only $15,000, while the sales amount to over five times that amount. This is evidently out of proportion, or else the goods are of such a nature as to command extraordinarily high prices. It is singular that out of $90,000 worth of merchandise only one-sixth of that amount should be sold during the year. The investments are evidently

paying well, but the expenses seem out of reason, especially the office and miscellaneous, which amount to $22,500. The interest on loans indicates that additional loans have been effected, but paid off during the year. The bad debts written off should, no doubt, be greater on such a large amount of book debts, especially as they have been standing so long. Even 1 per cent. or $2,500 would be a conservative estimate in any business.

PROFIT-AND-LOSS ACCOUNT

YEAR ENDED JUNE 30, 1912

Sales for year, less returns		$80,000.00
Stock on hand July 1, 1911	$50,000.00	
Purchases	40,000.00	
	$90,000.00	
Less stock on hand June 30, 1912	75,000.00	
Cost of goods sold		15,000.00
Gross profit		$65,000.00
Add dividends on investments		5,500.00
Total earnings		$70,500.00
Deduct		
The various expenses shown in the question, and more if desired amounting to		33,500.00
Balance, net profit for year		$37,000.00

41. The balance-sheet statement will not stand close inspection. Cash is reduced to its lowest point and furniture and good-will are worthless as security for loans. The lease is no doubt valuable, but it is not the kind of an asset on which a loan can be based. The investment seems to be paying dividends and might be good security, but the inventory is no doubt overstated, judging from the unreasonable proportions of items in the merchandise account. As $50,000 worth of goods was on hand at the first of the year, why were additional purchases made and liabilities incurred, if only $15,000 worth was disposed of? The book debts are three times the sales; this makes it seem that the object has been to make sales but no collections. Evidently some of these debts have been owing for years, and as the terms of credit seldom extend over so long a time it must be assumed that they are not collectible. The trade creditors show every indication also of having stood for years. The stock handled is only $90,000, while the liabilities owing are about four times that amount. Possibly the debtors and creditors are the

same persons, thus indicating a net credit balance of $94,500; the partners may even be included therein as creditors of the firm. At any rate, liabilities, as a rule, have to be paid, so they must be admitted. It may also be assumed that both partners are included in the capital and drawings.

STATEMENT OF CONDITION FOR THE BANK
BROWN & WILSON
JUNE 30, 1912

QUICK ASSETS		
Book debts		$250,000.00
Merchandise on hand		75,000.00
Investments at cost		50,000.00
Cash		500.00
Total quick assets		$375,500.00
LIABILITIES		
Trade creditors	$344,500.00	
Loans	27,000.00	
Total liabilities		371,500.00
Firm's net worth		$ 4,000.00

It will be seen that only the quick assets are included, as this is about all a bank cares for, though the present worth of the firm will include all the other assets. From the information given, however, it seems inexpedient to grant the loan.

Banks usually require of borrowers full information regarding their business affairs as well as a correct statement of their assets and liabilities. Forms are given borrowers to be filled in, and the searching questions to be answered, supply, fully, information regarding the concern and its business progress.

42. Question 12.—Prepare a sample statement of an administrator's final account for presentation in a probate court.

43. Answer to Question 12.—The final account of an administrator is the statement rendered by him to the probate court upon the completion of his official duties as administrator of an estate. In the meantime he may or may not have rendered one or more intermediate accounts of matters pertaining to the estate. The illustration given below is both the first and the final, which is similar in every way to the account submitted by an executor. In Pennsylvania, the court having

jurisdiction over such matters is known as the orphans' court, and in New York as the surrogate court.

The *executor* is a person or persons named by the testator in his last will and testament to settle all matters pertaining to his estate as directed by the will. In case no will has been executed, an *administrator* is appointed by the court to settle up the decedent's affairs. In case a will is made without naming an executor, or in case the one named declines to act, the court appoints an *adminsistrator with will annexed.* The phrase *with will annexed* is usually indicated by the letters C. T. A., *cum testamento annexo.*

It will be noticed that the form of account required in Pennsylvania is of the simplest kind, showing debits and credits respecting principal and the same as to income. In some states, the main account consists of a summary of separate schedules. Real estate must be recorded separately, as shown in the accompanying account. Every item in the administrator's account

FINAL ACCOUNT OF ADMINISTRATION IN THE ORPHANS' COURT FOR THE CITY AND COUNTY OF PHILADELPHIA

FIRST AND FINAL ACCOUNT OF RICHARD ROE, ADMINISTRATOR C. T. A. OF JOHN DOE, DECEASED, DECEMBER 18, 1912

PRINCIPAL—DR.

The accountant charges himself with the amount of inventory and appraisement as follows:

1,000 shares of U. G. I. at 90			$ 90,000.00
10,000 Philadelphia City 4's at par			10,000.00
500 shares of P. R. T. at 27			13,500.00
Note receivable, not due			5,000.00
Cash found on person of deceased		$ 88.00	
Cash deposited in Girard Trust Company		25,312.00	25,400.00
2 horses and 1 carriage			1,200.00
Furniture, books, etc.			2,200.00
Total appraisement			$147,300.00
The accountant also charged himself with the following amounts received in addition to the above:			
Gain on sale of horses sold for	$ 1,300.00		
Valued in inventory	1,200.00	$ 100.00	
Gain on sale of U. G. I. stock sold for	$91,000.00		
Valued in inventory	90,000.00	1,000.00	1,100.00
			$148,400.00

PRINCIPAL—CR.

The accountant claims credit as follows:

Register of wills for granting letters		$ 25.50	
Bond of administrator		50.00	
Advertising letters, etc.		15.00	
Funeral expenses paid		925.00	
Debts of deceased, specified		14,075.00	
Judgments against estate		8,000.00	
John Smith, Esq., professional services		250.00	
Register of wills for filing account			
Adjudication of court		48.50	
Commissions to accountant, 3 per cent.		4,452.00	
Loss on sale of books and furniture:			
Inventories	$2,200.00		
Sold for	2,000.00	200.00	
Total		$ 28,041.00	
Balance of principal for distribution		120,359.00	$148,400.00

ADMINISTRATOR'S ACCOUNT OF INCOME

INCOME—DR.

The accountant charges himself with income received as follows:

Dividends U. G. I. stock	$1,000.00		
(Dates)	1,000.00		
	1,000.00		
	1,000.00	$ 4,000.00	
Interest on City 4's		200.00	
Interest on deposits		200.00	$ 4,400.00

INCOME—CR.

The accountant claims credits as follows:

Commission to accountant, 3 per cent.	$ 132.00	
Balance of income for distribution	4,268.00	$ 4,400.00

RECAPITULATION

Balance of principal	$120,359.00	
Balance of income	4,268.00	$124,627.00
Payments on account to widow of deceased	$ 6,000.00	
Payments on account to son of deceased	3,500.00	9,500.00
Balance		$115,127.00
Consisting as follows:		
Cash on hand	$ 91,627.00	
10,000 Philadelphia City 4's	10,000.00	
500 shares P. R. T.	13,500.00	$115,127.00

ACCOUNT OF REAL-ESTATE TRANSACTIONS

REALTY ACCOUNT—DEBIT

The accountant charges himself with the purchase money of

725 North Second Street sold for	$11,000.00

Realty Account—Credit

Accountant asks allowances for the following		
Commission to John Smith, 1 per cent.	$ 110.00	
Commission to accountant, 3 per cent.	330.00	
Balance	10,560.00	$11,000.00

(Acknowledged before register of wills or notary)

Richard Roe,
Administrator.

should bear date of entry, though dates have been omitted in the accounts illustrated herewith.

The accounts might even remain untouched when titles are passed, or be transferred to a different ledger. If mortgages are received, the account Mortgages Receivable should be debited, likewise if some other security is passed.

44. Question 13.—The American Gas Light Company had operated a gas plant since the beginning of the year 1914. For the purpose of acquiring this industry, the National Gas Company was organized April 1, 1917, with a capital of $100,000, and after purchasing all of the capital stock of the American Company, issued $100,000 of first-mortgage, 6-per-cent., gold bonds, dated April 1, 1917, due April 1, 1947, interest payable January 1 and July 1 of each year. In acquiring the stock of the American Company, paying organization expenses, etc., the National Company used all of its capital stock and $90,000 of the first-mortgage bonds, holding in reserve $10,000 of bonds for improvements.

Make the necessary journal entries to open the books of the new company and prepare a balance sheet, dated June 30, 1917. Also prepare a profit-and-loss account showing the average annual results of the operations of the old company. The inventory was as follows: Coal, $400; coke, $150; tar, $100; total, $650. June 30, 1917, the two companies were united by a certificate of merger and new books were opened. The accounts of the American Gas Light Company had not been closed at any time during that company's existence, and at the date of the merger stood as shown on the following page. While the trial balance given in the problem is shown in ledger form, the statements in the answer may be shown in ledger form or in statement form.

Debits		Credits	
Land, buildings, machinery, mains, and franchises	$ 82,360.73	Capital	$ 50,000.00
Materials and tools	1,856.30	Bills payable	5,000.00
Coal, including freight	47,540.45	Accounts payable	2,679.81
Labor	50,668.73	Gas account	157,683.33
Repairs	13,872.46	Coke account	6,210.69
Water and supplies	3,869.39	Tar account	4,500.54
Superintendence	3,500.00		
Salaries, clerks and collectors	5,600.00		
Office expenses	2,100.00		
Insurance	1,435.00		
Taxes	4,237.10		
Interest	1,450.40		
Cash	2,251.47		
Consumer's accounts	3,210.44		
Other accounts receivable	2,121.90		
	$226,074.37		$226,074.37

45. Answer to Question 13.

MANUFACTURING ACCOUNT

June 30, 1917

Coal		$ 47,540.45	Manufacturing cost transferred to trading account.	$124,473.13
Labor		50,668.73		
Repairs		13,872.46		
Water		3,869.39		
Superintendence		3,500.00		
Insurance		1,435.00		
Taxes		4,237.10		
		$125,123.13		
Less inventories				
Coal	$400.00			
Coke	150.00			
Tar	100.00	650.00		
Manufacturing cost		$124,473.13		$124,473.13

TRADING ACCOUNT

Manufacturing cost	$124,473.13	Sales	
Gross profits to profit-and-loss account	43,921.43	Gas account	$157,683.33
		Coke account	6,210.69
		Tar account	4,500.54
	$168,394.56		$168,394.56

PROFIT-AND-LOSS ACCOUNT

Salaries	$ 5,600.00	Gross profits	$43,921.43
Office expenses	2,100.00		
	$7,700.00		
Ordinary business profits, balance down	36,221.43		
	$43,921.43		$43,921.43

NET-PROFITS ACCOUNT

Interest	$ 1,450.40	Balance down	$36,221.43
Net profits to surplus account	34,771.03		
	$36,221.43		$36,221.43

BALANCE SHEET OF OLD COMPANY AFTER CLOSING BOOKS

Land, buildings, machinery, mains, and franchises	$82,360.73	Bills payable	$ 5,000.00
Materials and tools	1,856.30	Accounts payable	2,679.81
Inventories	650.00	Capital stock	50,000.00
Consumer's accounts	3,210.44	Surplus	34,771.03
Other accounts receivable	2,121.90		
Cash	2,251.47		
	$92,450.84		$92,450.84

OPENING ENTRIES OF NEW COMPANY

Sundry assets, as per balance sheet	$ 92,450.84	Liabilities, as per balance sheet	$ 7,679.81
Capital stock, old company under merger; this is new treasury stock of new company	50,000.00	Capital stock, new	100,000.00
Treasury bonds	10,000.00	Capital stock, old	50,000.00
Organization account	106,578.97	Bonds	90,000.00
		Interest on bonds 6 per cent., on $90,000 3 months	1,350.00
		Reserve account	10,000.00
	$259,029.81		$259,029.81

CONSOLIDATED BALANCE SHEET

As At June 30, 1917

Sundry assets	$199,029.81	Liabilities	$ 7,679.81
Treasury stock	50,000.00	Capital stock	150,000.00
Treasury bonds	10,000.00	Bonds	90,000.00
		Bond interest	1,350.00
		Reserve account	10,000.00
	$259,029.81		$259,029.81

C. P. A. QUESTIONS AND ANSWERS

(PART 2)

QUESTIONS AND ANSWERS—(Continued)

1. **Question 14.**—A and B are partners carrying on a business in Winnipeg. On January 1, 1914, after adding profits for the past half year, A's capital amounted to $150,000, and B's to $100,000. On that date they take into partnership C upon the following terms: He is to bring in capital amounting to $25,000, and each partner is to be credited with interest on his capital at 6 per cent. per annum. All profits (after debiting interest) up to $25,000 are to be shared by A and B exclusively in proportion to the amounts of their capital at January 1, 1914. All profits in excess of $25,000 are to be shared equally by the three partners. Accounts are to be prepared and profits and interest credited half yearly. C is to be credited with a salary of $5,000 per annum. On June 30, 1914, the profits divisible after debiting C's salary, which he has drawn, but before charging interest on partner's capital, amounted to $75,000. The partners' withdrawals, which are not chargeable with interest, were A, $12,500; B, $10,000; and C, $3,750. Draw up partners' separate accounts as they should stand on July 1, 1914.

Assume that instead of a profit a loss of $75,000 has occurred; how should this be treated in the accounts in the absence of any direct provision in the partnership agreement relative to losses?

2. **Answer to Question 14.**—The following capital accounts and profit-and-loss accounts are clear enough without additional comment. C's salary of $2,500 for the half year is credited as per contract, and his drawings are assumed to have included this amount.

In the event of a loss of $75,000, as suggested in the question, this amount plus interest on capital aggregating $83,250 would be charged in equal proportions to the three partners, giving to each $27,750. This is on the assumption that no direct provision has been made in reference to losses. Each partner would of course be credited with interest on capital per agreement. With reference to the assumed loss, if the

PARTNERS' ACCOUNTS

A's Account

1914		1914	
June 30, Cash	$ 12,500.00	Jan. 1, Balance	$150,000.00
June 30, Balance	170,916.67	June 30, Interest	4,500.00
		June 30, Gain	15,000.00
		Gain	13,916.67
	$183,416.67		$183,416.67
		July 1, Balance	$170,916.67

B's Account

1914		1914	
June 30, Cash	$ 10,000.00	Jan. 1, Balance	$100,000.00
June 30, Balance	116,916.67	June 30, Interest	3,000.00
		June 30, Gain	10,000.00
		Gain	13,916.67
	$126,916.67		$126,916.67
		July 1, Balance	$116,916.67

C's Account

1914		1914	
June 30, Cash	$ 3,750.00	Jan. 1, Cash	$25,000.00
June 30, Balance	38,416.66	June 30, Salary	2,500.00
		June 30, Interest	750.00
		June 30, Gain	13,916.66
	$42,166.66		$42,166.66
		July 1, Balance	$38,416.66

DISTRIBUTION OF PROFITS

June 30, 1914

Profits for distribution		$75,000.00
Less interest on capital		
Interest due A	$ 4,500.00	
Interest due B	3,000.00	
Interest due C	750.00	8,250.00
		$66,750.00
Balance for distribution		66,750.00
Deduct amounts due A and B		
Due A, three-fifths of $25,000	$15,000.00	
Due B, two-fifths of $25,000	10,000.00	25,000.00
Balance for equal division		$41,750.00
A's one-third share	$13,916.67	
B's one-third share	13,916.67	
C's one-third share	13,916.66	$41,750.00

existing agreement between the partners implied a similar application in case of losses, then the matter of apportioning said losses would provide an interesting problem.

3. Question 15.—The Zebley Garment Company who were burned out on the night of September 16, 1912, filed with the insurance companies a claim for $95,436.70, which it is necessary to verify or disprove. The following balance sheet was found as of August 1, 1912:

BALANCE SHEET
AUGUST 1, 1912

Assets		Liabilities	
Cash	$ 9,224.67	Accounts payable	$ 59,611.46
Accounts receivable	88,669.43	Bills payable	42,183.24
Bills receivable	2,473.62	Capital stock	50,000.00
Merchandise inventory	42,618.97	Surplus	14,203.16
Machinery	20,419.04		
Furniture and fixtures	2,000.00		
Prepaid taxes and insurance	592.13		
Total	$165,997.86	Total	$165,997.86

At the close of business September 16, their ledger showed the following balances:

LEDGER ACCOUNT
SEPTEMBER 16, 1912

Capital stock		$ 50,000.00
Surplus		14,203.16
Cash	$ 5,418.22	
Accounts receivable	118,871.14	
Bills receivable	6,217.24	
Accounts payable		72,898.66
Bills payable		63,114.02
Machinery	21,619.34	
Furniture and fixtures	2,147.30	
Inventory, August 1, 1912	42,618.97	
Dividends	6,000.00	
Sales		162,917.31
Merchandise purchases	103,430.22	
Labor	37,619.14	
Power, light, and heat	3,716.47	
Factory expense	7,119.11	
Office salaries	2,250.00	
Office expenses	319.54	
Selling expenses	4,716.92	
Insurance	318.16	
Taxes	751.38	
	$363,133.15	$363,133.15

The company's gross profits on sales has been very uniform, averaging 20 per cent. ever since the business was started; 10 per cent. for depreciation has been written off every year from machinery and furniture and fixtures. Insurance policies covering merchandise, machinery, furniture, and fixtures aggregate \$100,000 and all contain the 80 per cent. coinsurance clause. The merchandise and furniture and fixtures were a total loss. The salvage in machinery is valued at \$2,500, at which value the insured decided to retain it. Prepare statement of claims against the insurance companies:

4. Answer to Question 15.—The question asks only for a statement of claim against the insurance companies, but this necessitates the determining of values at the time of the fire. To do this requires an analysis of the figures presented and the establishment of an equitable valuation of the properties destroyed. In a manufacturing business, the direct manufacturing charges form a part of the cost of goods destroyed and should be included; this is particularly the case with goods in the process of manufacture. The direct costs shown in the question, however, are applicable to goods that have been completed and sold, as well as to those still in process; therefore, these goods must be considered in the aggregate instead of separately. In the manufacturing costs are included labor, power, light, and heat, and factory expenses, as is shown by the accompanying statement. It would be proper, no doubt, to add a portion of the insurance and taxes also if the portion applicable to the $1\frac{1}{2}$ months of operation could be determined. Depreciation of machinery for $1\frac{1}{2}$ months would be a proper charge if considered; it is included, however, in the inventory valuation itself, so it is inadvisable to write off further depreciation. The fact that 10 per cent. has been written off annually does not mean that the book figures present a true valuation; it may be worth considering more than the amount shown. The inventory of furniture and fixtures is admitted at book value, though it is prudent to write it down. In an extraordinary case such as this, it would seem advisable to include in the cost of manufactured goods a portion of the general and

administrative expenses. No doubt a portion, at least, would be directly applicable thereto in the same manner as labor and direct factory expenses.

5. The matter of doubt in the consideration of a case like this suggests to the accountant the desirability of a conservative decision in making up the claim for goods destroyed. It might even be claimed by the manufacturer that the goods were worth more than the bare manufacturing cost, on the assumption that if purchased elsewhere a higher price would have to be paid. It is evident that the company's claim for $95,436.70 contains either estimated profits or considerably more loading than we have admitted, as it seems impossible to reconcile it with the information submitted. No doubt the accountant after investigation determined that the gross profit for the past years averaged 20 per cent., while the company's officials were estimating differently. The gross profit on sales would have to be estimated at about 35 per cent. to result in a claim such as the one presented by the company. The 20-per-cent. gross profit is taken on the cost of sales and not on the selling price, as is so frequently done in trading concerns. Where costs are well established, as in a manufacturing business, percentages may be based on the cost price instead of on the sales. In arranging the gross profit, however, considerable care should be exercised to see that the elements of cost are maintained uniformly from year to year. The adjusters are therefore asked to determine or estimate the amount of loss. The insured, on the other hand, is not bound to accept the damage claim decided upon by the adjuster, in which case some other expediency must be resorted to. Possibly accountants and appraisers may have to be employed or some equitable plan of settlement decided upon. Sometimes the courts are resorted to for decisions.

6. Insurance companies usually reserve the right to replace or rebuild damaged property in case reasonable cash settlements cannot be made. The companies are interested in preventing loss by fire, and therefore maintain in large cities what

are known as fire patrol, underwriters' patrol, salvage corps, etc. It is their duty to visit the scene of the fire and to save as much property as possible. The expense of maintenance is met by the different companies, and their equipment is in every way adapted to salvage duty. Salvage has reference to the goods saved from loss by fire; in this example, it amounts to $2,500. It is presumed, of course, that the books and records have all been secured.

The aggregate insurance carried is $100,000, which is considerably above the value of property owned at the time of the fire. Sometimes a blanket or open policy not to exceed a

STATEMENT OF CLAIM FOR LOSS BY FIRE

SEPTEMBER 16, 1912

Value of merchandise inventory, August 1, 1912			$ 42,618.97
Merchandise purchases between August 1, 1912, and September 16, 1912			103,430.22
Total merchandise			$146,049.19
Add manufacturing charges			
Labor paid		$37,619.14	
Power, light, and heat		3,716.47	
Factory expense		7,119.11	48,454.72
Total cost of merchandise			$194,503.91
Deduct cost of goods sold			135,764.43
Sales $162,917.31 ÷ 120			
The gross profit has been uniform for several years at 20 per cent.			
Value of merchandise destroyed			$ 58,739.48
Add value of properties destroyed			
Machinery, book value August 1, 1912	$20,419.04		
Additions between August 1 and September 16	1,200.30	$21,619.34	
Less salvage retained		2,500.00	19,119.34
Furniture and fixtures, value August 1, 1912		$ 2,000.00	
Additions between August 1 and September 15		147.30	2,147.30
Total damage claim			$ 80,006.12

CERTIFICATE

I hereby certify that the above statement of claims is in accordance with the books, and that in my judgment it represents a fair basis for settlement.

R. J. BENNETT, Certified Public Accountant
September 18, 1912

specified amount is made out to cover the value of goods on hand at any time. This is desirable where goods are not maintained at any fixed amount or quantity, and in case of fire the amount of loss must be determined. It seems evident that the case under consideration includes the open policy, though it is probable that an ordinary policy had been taken out on machinery and fixtures.

7. The problem calls for only a statement of fire claim against the insurance companies, which is presented herewith, but a profit-and-loss statement and balance sheet have been added, as they will increase the value of the answer as a lesson in accountancy. The statement of claim would no doubt be accompanied by the accountant's letter to the client who engaged his services.

BALANCE SHEET

As on September 16, 1912, After Adjustment of Fire Loss With the Insurance

Assets		Liabilities	
Cash	$ 5,418.22	Accounts payable	$ 72,898.66
Accounts receivable	118,871.14	Bills payable	63,114.02
Bills receivable	6,217.24		
Machinery, salvage valuation	2,500.00		
Claims for fire loss against insurance companies	80,006.12		
Total assets	$213,012.72	Total liabilities	$136,012.68
		Present net capital of company	$ 77,000.04
			$213,012.72

ANALYSIS OF CAPITAL ACCOUNT

Capital stock paid up		$50,000.00
Surplus, August 1, 1912	$14,203.16	
Less dividends paid	6,000.00	8,203.16
Net profit for 1½ months		18,796.88
Present capital		$77,000.04

The books should be adjusted to agree with the results here shown.

OPERATING AND PROFIT-AND-LOSS ACCOUNTS

FROM AUGUST 1, 1912, TO SEPTEMBER 16, 1912

CREDITS		
Sales for 1½ months	$162,917.31	
Fire claim appraised by insurance companies for goods destroyed	58,739.48	
Fire claim for machinery, appraised	19,119.34	
Fire claim furniture and fixtures, appraised	2,147.30	
Total credits	$242,923.43	
CHARGES		
Merchandise inventory, August 1, 1912	$ 42,618.97	
Merchandise purchases	103,430.22	
Labor	37,619.14	
Power, light, and heat	3,716.47	
Factory expense	7,119.11	
Cost of merchandise	$194,503.91	
Office salaries	2,250.00	
Office expenses	319.54	
Selling expenses	4,716.92	
Insurance	318.16	
Taxes	751.38	
Fire loss, furniture and fixtures	2,147.30	
Fire loss, machinery	19,119.34	
Total charges		$224,126.55
Net profit		$ 18,796.88

8. Question 16.—The following is abstracted from an agreement of merger and consolidation made December 31, 1912, between the Imperial Iron Company and the Central Iron Company. Both companies were organized under the laws of Pennsylvania and agreed to merge and consolidate into a single corporation. The name of the corporation formed by said consolidation was the Imperial Iron Company.

The amount of capital stock of the new corporation is $100,000, all of which shall be common stock, divided into 1,000 shares of a par value of $100. The manner of distributing capital stock shall be as follows: The capital stock of the Imperial Iron Company shall be exchangeable for capital stock of the new corporation share for share, and the balance of the capital stock of the new corporation hereby formed shall be distributed to the stockholders of the Central Iron Company, in proportion to their present holdings.

The Imperial Iron Company was incorporated shortly before the date of the merger, and had transacted no business except the issuance of ten shares capital stock, $100 each, for which payment of $1,000 had been received, and which was in the

treasury of the company on the date of the merger. Directly after the merger this sum was transferred to the bank-desposit account of the consolidated company and credited to an account called "Suspense."

The Central Iron Company had for a number of years been actively engaged in business. Its fiscal year ended September 30, 1912, at which time an inventory was taken and its accounts had been properly closed. At the date of the merger the following trial balance was drawn from the books:

TRIAL BALANCE
DECEMBER 31, 1912

Cash	$ 20,000.00	
Accounts receivable	15,000.00	
Merchandise inventory, September 30, 1912	130,000.00	
Merchandise purchases	250,000.00	
Expenses	25,000.00	
Accounts payable		$ 10,000.00
Sales		300,000.00
Capital stock		30,000.00
Undivided profits, balance September 30, 1912		100,000.00
	$440,000.00	$440,000.00

The account books of this concern were not closed at the date of the merger and no inventory was taken. Although the exchange of capital stock was effected and all business, after December 31, 1912, was transacted under the name of the Imperial Iron Company, it was not until March 31, 1913, that an accountant was asked to state the accounts of the new company from the date of consolidation. On March 31, 1913, before the accountant had commenced his work, an inventory was taken which showed the value of merchandise on hand as at that date to be $216,250. The following is the trial balance of that date:

TRIAL BALANCE
MARCH 31, 1913

Cash	$ 26,000.00	
Accounts receivable	10,000.00	
Merchandise inventory, September 30, 1912	130,000.00	
Merchandise purchased	600,000.00	
Expenses	60,000.00	
Accounts payable		$ 10,000.00
Sales		685,000.00
Suspense		1,000.00
Capital stock		30,000.00
Undivided profits		100,000.00
	$826,000.00	$826,000.00

Prepare a balance sheet of the consolidated company, as at March 31, 1913, and a profit-and-loss account arranged to show the profits of the consolidated company for the 3 months ended March 31; and of the Central Iron Company for the 3 months ended December 31; also statement showing the disposition of profits taken over by the new company. State what basis was used in determining the approximate value of merchandise on hand December 31.

9. Answer to Question 16.—In this question the requirements are a balance sheet of the consolidated company on March 31, 1913; a profit-and-loss account for the consolidated company for the 3 months ended March 31, 1913; a profit-and-loss account of the Central Iron Company for the 3 months ended December 31, 1912; a statement showing disposition of profits taken over by the new company; and the basis of determining the approximate value of merchandise on hand December 31, 1912. Adjusting journal entries might also be of advantage in providing a clearer exhibit of the necessary adjustments.

The Imperial Iron Company had just been incorporated and had not begun operations. Its authorized capital stock is not given, but $1,000 has been subscribed and paid in, and is still in the treasury; this amount is to be turned over to the new company and credited to a suspense account, and an equal amount of the new company's stock received. It is credited to this account temporarily and a proper adjustment will be made later.

The Central Iron Company is an established company, and its fiscal year ended September 30, 1912. It has a capital stock of $30,000, and a surplus of $100,000, making a total capital of $130,000. On December 31, 1912, the consolidation took place, the exchange having been effected on the basis of accounts shown by the trial balance of that date without closing the ledger. By the terms of the amalgamation, the stockholders of this company are to have all of the stock but $1,000 and will receive certificates for $99,000 in exchange for $30,000 of the stock of the old company; this is an increase of $69,000.

10. The capital and surplus of the Central Iron Company increase from $130,000, on September 30, to $180,000 on Decem-

ber 31. The increase of capital from $30,000 to $99,000 may be adjusted into surplus, as shown in the accompanying statements, or the $69,000 may be charged to good-will account. If the latter plan is followed, the surplus on January 1, 1913, will show a credit of $150,000, and on April 1, $211,250. Either plan may be followed. In the first plan, the Central Iron Company turns over a surplus of $81,000 over and above the amount of stock received. This is now owned by the consolidated company, but as the stockholders in the former company own practically all of the stock of the new and amalgamated company they are not losing anything by making the liberal donation of surplus profits. Except for the purpose of reorganizing and increasing its capital stock, or possibly for the purpose of changing its name, no gain will accrue to the Central Iron Company by the so-called merger and consolidation. It could have declared a special stock dividend payable out of surplus profits and have provided for same by an increase of capital stock.

11. The question asks for an approximate valuation of inventory as on December 31, 1912. The first step, as shown by the merchandise account, is to determine the gross gain for the entire 6 months ended March 31, 1913, which amounts to $171,250. It will be noted that this gain is just one-fourth of the sales or one-third of the cost of goods sold; therefore, the gains for the first 3 months may be considered as having been in the same proportion. The sales for the 3 months ended December 31, 1912, were $300,000; and if one-fourth of this amount represents profits, the cost of goods sold must have been $225,000. Deducting this amount from $380,000, the cost of all goods to that date gives $155,000 as the value of merchandise on hand. By adding together the gross gain in trading and profit-and-loss accounts it will be found that they equal the amount shown by the merchandise account, $171,250.

The surplus account is included for the purpose of showing the disposition of profits taken over from the Central Iron Company. It is presumed that the books formerly used by the Central Iron Company are continued; the adjusting entries that follow are made on this presumption. The

various official steps required in the consolidation of the two corporations, the transfer of assets and liabilities, etc., must be carried out to the letter. These steps will not vary to any great extent from those required in the amalgamation of two unincorporated concerns into one corporation. The adjusting entries are made on the dates indicated but the usual routine entries have been omitted.

ADJUSTING ENTRIES

DECEMBER 31, 1912

Cash	$ 1,000.00	
Suspense		$ 1,000.00
For amount of cash turned over by Imperial Company, per agreement this day.		
Profit and loss	50,000.00	
Surplus		50,000.00
Transfer of profits of Imperial Iron Company.		
Surplus	69,000.00	
Capital stock		69,000.00
For transfer of surplus profits to capital account for account of Imperial Iron Company, per agreement.		
Suspense	1,000.00	
Capital stock		1,000.00
For transfer of amount credited to suspense account.		
MARCH 31, 1913		
Profit and loss	62,250.00	
Surplus		62,250.00
For transfer of net gain for 3 months to surplus account.		

MERCHANDISE ACCOUNT

MARCH 31, 1913

Debits		Credits	
Inventory, September 30, 1912	$130,000.00	Total sales for 6 months	$685,000.00
Purchases	600,000.00		
Total	$730,000.00		
Less inventory, March 31, 1913	216,250.00		
Cost of sales	$513,750.00		
Gross gain	171,250.00		
	$685,000.00		$685,000.00
		Balance, gross gain	$171,250.00

TRADING AND PROFIT-AND-LOSS ACCOUNTS

CENTRAL IRON COMPANY

DECEMBER 31, 1912

Debits		Credits	
Inventory, September 30, 1912	$130,000.00	Sales for 3 months	$300,000.00
Purchases	250,000.00		
Total	$380,000.00		
Less inventory, December 31, 1912	155,000.00		
Cost of goods sold	$225,000.00		
Gross gain	75,000.00		
	$300,000.00		$300,000.00
Expenses	$ 25,000.00	Gross gain brought down	$ 75,000.00
Net gain	50,000.00		
Carried to suspense account	$ 75,000.00		$ 75,000.00

BALANCE SHEET

CENTRAL IRON COMPANY

DECEMBER 31, 1912

Assets		Liabilities		
Cash on hand	$ 20,000.00	Accounts payable		$ 10,000.00
Accounts receivable	15,000.00	Capital stock		30,000.00
Goods on hand	155,000.00	Surplus, September 30, 1912	$100,000	
		Add net gain	50,000	150,000.00
	$190,000.00			$190,000.00

This exhibit shows the condition of the company at the time of consolidation. The capital and surplus of $180,000 is given in exchange for $99,000 of stock of the new company. This does not change the actual total value back of the shares, although it does change the book value of each share. On a basis of equal earnings during any period there would be the same amount to distribute in dividends. This distribution would return the same amount in dollars to each shareholder but the per cent. on the total face value of the shares held would be less; there being now shares held to the value of $99,000 in place of $30,000.

TRADING AND PROFIT-AND-LOSS ACCOUNTS

IMPERIAL IRON COMPANY

THREE MONTHS ENDED MARCH 31, 1913

Debits		Credits	
Inventory, January 1, 1913	$155,000.00	Sales for 3 months	$385,000.00
Purchases	350,000.00		
	$505,000.00		
Less inventory, March 31, 1913	216,250.00		
Cost of goods sold	$288,750.00		
Gross gain	96,250.00		
	$385,000.00		$385,000.00
Expenses	$ 35,000.00	Gross gain brought down	$ 96,250.00
Net gain	61,250.00		
Carried to surolus	$ 96,250.00		$ 96,250.00

The net gain is carried to surplus account where it will await the disposition to be made of it by the directors. If the fiscal year is to remain as before, the period has arrived for the semi-annual dividend.

CONSOLIDATED BALANCE SHEET

IMPERIAL IRON COMPANY

MARCH 31, 1913

Assets		Liabilities		
Cash on hand	$ 26,000.00	Accounts payable		$ 10,000.00
Goods on hand	216,250.00	Capital stock		100,000.00
Accounts receivable	10,000.00	Imperial Iron Co.	$ 1,000	
		Central Iron Co.	99,000	
		Surplus		$142,250.00
		Acquired	$81,000	
		Earned	61,250	
	$252,250.00			$252,250.00

If good-will had been considered for the increase of stock of the Central Iron Company, then good-will $69,000 would appear among the assets and surplus would be increased to $211,250.

SURPLUS ACCOUNTS

To capital per adjustment, December 31, 1912	$ 69,000.00	Balance, September 30, 1912	$100,000.00
Balance	142,250.00	Added, December 31, 1912	50,000.00
		Added, March 31, 1913	61,250.00
	$211,250.00		$211,250.00

The term undivided profits, as used in the question, may be used instead of surplus. If good-will had been considered, the present balance to surplus account would be increased by $69,000.

12. **Question 17.**—The following figures are taken from the books of the Browning Stove Company on December 31:

Inventory of finished goods, January 1	$ 3,684.57
Inventory of raw materials, January 1	11,392.70
Purchase of raw materials	62,519.85
Sales	217,387.42
Wages	109,317.88
Rent	19,500.00
Discounts received on purchases	375.60
Discounts allowed on sales	186.36
Power, light, and heat	8,710.64
Light and heat for office	168.00
Repairs	1,090.00
Packing	2,017.00
Factory expense	3,270.00
General expense	5,230.00
Factory insurance	1,050.00
General insurance	750.00
Machinery and plant	12,350.00
Tools	2,600.00
Commissions	7,642.00
Office salaries	9,700.00
Interest on loans	8,930.00
Salesmen's salaries	440.00
Loans payable	22,000.00
Discount lost	120.00
Notes receivable	130,000.00
Notes receivable discounted	8,000.00
Notes payable	19,500.00
Accounts receivable	101,026.00
Accounts payable	30,020.00
Office furniture	1,100.00
Furniture and fixtures	1,950.00
Cash on hand	1,825.00
Cash in banks	26,467.00
Returned sales	276.00
Capital	200,000.00
Reserve for depreciation	3,236.98

Reserve for bad debts	$ 5,727.00
Freight and cartage inwards	727.00
Stable expenses	2,750.00
Horses, wagons, and harnesses	8,500.00
Postage and expressage	1,250.00
Superintendence	3,500.00
Taxes	250.00
Good-will	10,000.00
Stationery and printing	1,080.00
Advertising	8,630.00
Surplus, previous year	63,753.00

Prepare from these a trial balance, arranged in systematic order as to balance-sheet accounts, assets and liabilities, and profit-and-loss accounts, expenses and revenues, the expenses divided between commercial and manufacturing, so as to facilitate the preparation of financial or business statements. Draft journal entries for closing books. Prepare manufacturing, trading, and profit-and-loss accounts, and verify the results here shown by a balance sheet. The following inventories and adjustments are to be taken into consideration before preparing the statements asked for:

Raw material	$16,250.00
Finished goods	9,386.00
Tools	2,000.00
Office furniture	1,000.00
Furniture and fixtures	1,500.00
Stationery and printing	300.00

Allow for depreciation: on machinery and plant, 5 per cent.; on horses, wagons, and harnesses, 10 per cent.; reserve for bad debts, 3 per cent. on accounts receivable only. The item of rent $19,500 is to be apportioned as follows: 53 per cent. for factory, 22 per cent. for salesrooms, and 25 per cent. for office. The item of superintendence $3,500 is to be divided three-fifths to factory, and two-fifths to general expense.

13. Answer to Question 17.—This question presents many interesting points, and no doubt, was designed to test the applicant's ability in charting and planning the ledger accounts, as well as in setting forth the required information in suitable business statements. There is usually too much disregard on the part of bookkeepers, for the systematic arrangement of ledger accounts, and in many cases the ledger represents a jumbled mass of accounts opened on ledger pages regardless

of location, space required, classification, or logical division. Before the ledger is opened, care should be taken in planning the order in which the accounts should be shown therein, and the number of pages to be allotted to each. Accounts that are likely to require two or more pages during the life of the ledger, should be given sufficient space to accommodate the records of said accounts without having to be transferred to another part of the ledger.

The arrangement of accounts as shown in the trial balance, is so conveniently planned that the usual statements can be made up with very little effort. The location of accounts may not be satisfactory to some accountants, and the division may not please in all cases, but that is immaterial as long as the object is reached and satisfactory results attained. This order or arrangement, however, has considerable merit and is worthy of adoption, though any other convenient plan may suit just as well.

14. The ledger accounts begin with the assets, arranged in the order shown herein, and listed according to availability in case of realization. Cash is first because it is available and ready for use at any time. Accounts and notes of customers come next, as they are most readily converted into cash. The liabilities follow, and are arranged in the order in which they will rank in the matter of payment or liquidation; notes and accounts are usually first demands, and capital stock the very last. Following these are the expense accounts, which are divided as among manufacturing, selling, and general. These divisions will greatly facilitate the preparation of business and financial statements and are advisable where a great number of accounts are required. The expense accounts may be arranged in alphabetical order, as shown under section of general expenses.

As a rule, several pages are left blank in each section for any additional accounts that may be required during the course of business. For instance, cash will appear on page 1 and good-will on page 20; then skipping a few pages, notes payable will follow on page 31. The expense or operating accounts

TRIAL BALANCE, DECEMBER 31

ASSETS		
Cash on hand	$ 1,825.00	
Cash in bank	26,467.00	
Notes receivable, per schedule	130,000.00	
Accounts receivable, per schedule	101,026.00	
Inventory of finished goods, January 1	3,684.57	
Inventory of raw material, January 1	11,392.70	
Tools	2,600.00	
Furniture and fixtures	1,950.00	
Office furniture	1,100.00	
Horses, wagons, and harnesses	8,500.00	
Machinery and plant	12,350.00	
Good-will	10,000.00	
LIABILITIES		
Notes payable, per schedule		$ 19,500.00
Notes receivable, discounted, per schedule		8,000.00
Accounts payable, per schedule		30,020.00
Loans payable, per schedule		22,000.00
Reserve for depreciation		3,236.98
Reserve for bad debts		5,727.00
Surplus, previous year		63,753.00
Capital		200,000.00
REVENUES		
Sales		217,387.42
Discounts received on purchases		375.60
MANUFACTURING EXPENSES		
Purchases, raw material	$ 62,519.85	
Freight and cartage inwards	727.00	
Wages	109,317.88	
Power, light, and heat	8,710.64	
Factory expenses	3,270.00	
Factory insurance	1,050.00	
Superintendence, factory	2,100.00	
Repairs	1,090.00	
Rent of factory	10,335.00	
COMMERCIAL EXPENSES		
Advertising	8,630.00	
Salesmen's salaries	8,930.00	
Commissions	7,642.00	
Returned sales	276.00	
Discount on sales	186.36	
Packing	2,017.00	
Rent of salesrooms	4,290.00	
Stable expenses	2,750.00	
GENERAL EXPENSES		
Discount lost	120.00	
General expense	5,230.00	
General insurance	750.00	
Interest on loans	440.00	
Light and heat, office	168.00	
Office salaries	9,700.00	
Postage and expressage	1,250.00	
Rent for office	4,875.00	
Superintendence, general	1,400.00	
Stationery and printing	1,080.00	
Taxes	250.00	
	$570,000.00	$570,000.00

may then begin on page 51, and so on. For convenience, the sections are often given 100 pages each, in which case

JOURNAL ENTRIES

Manufacturing account	$ 62,519.85	
Purchases		$ 62,519.85
Manufacturing account	137,818.02	
Freight inwards		727.00
Wages		109,317.88
Power, light, heat		8,710.64
Factory expenses		3,270.00
Factory insurance		1,050.00
Superintendence		2,100.00
Rent, factory		10,335.00
Repairs		1,090.00
Reserve for depreciation		617.50
Tools account		600.00
Trading account	195,480.57	
Manufacturing account		195,480.57
Sales account	276.00	
Returned sales		276.00
Sales account	217,111.42	
Trading account		217,111.42
Trading account	35,295.36	
Advertising		8,630.00
Salesmen's salaries		8,930.00
Commissions		7,642.00
Discount on sales		186.36
Packing		2,017.00
Rent of salesrooms		4,290.00
Stable expenses		2,750.00
Reserve for depreciation		850.00
Profit and loss	7,963.08	
Trading account		7,963.08
Discount on purchases	375.60	
Manufacturing account		375.60
Profit and loss	28,543.78	
Discount lost		120.00
General expense		5,230.00
General insurance		750.00
Interest on loans		440.00
Light and heat		168.00
Office salaries		9,700.00
Postage and expressage		1,250.00
Rent		4,875.00
Superintendence		1,400.00
Stationery and printing		780.00
Taxes		250.00
Office furniture		100.00
Furniture and fixtures		450.00
Reserve for bad debts		3,030.78
Surplus account	36,131.26	
Profit and loss		36,131.26

NOTE.—To save space, explanations are omitted, also entries dealing with inventories.

the manufacturing account shown herein will be on page 51 or 101, according to the plan followed. In the use of modern loose-leaf and card ledgers of course these suggestions may be disregarded.

15. It will be noticed that the information contained in the balance sheet is subdivided under appropriate headings; this plan might be followed in the revenue statements also if thought advisable. In many cases such divisions are to be recommended, as they enable the unskilled person to comprehend the statements more readily without being required to analyze for himself. This matter of subdividing statements, however, may easily be overdone, and therefore subdivisions should not be used too freely nor where unnecessary.

MANUFACTURING ACCOUNT

DECEMBER 31

Debits			Credits	
Inventory raw material January 1		$11,392.70	Cost of goods manufactured carried to trading account	$195,104.97
Purchases raw material		62,519.85		
Freight inwards		727.00		
		$74,639.55		
Deduct				
Discount on purchases	$ 375.60			
Raw material on hand	16,250.00	16,625.60		
Material consumed		$ 58,013.95		
Wages		109,317.88		
Power, light, and heat		8,710.64		
Factory expenses		3,270.00		
Factory insurance		1,050.00		
Superintendence, factory		2,100.00		
Rent of factory		10,335.00		
Repairs		1,090.00		
Depreciation				
On machinery and plant, 5 per cent.		617.50		
On tools		600.00		
		$195,104.97		$195,104.97

TRADING ACCOUNT

Debits		Credits	
Inventory, finished goods, January 1	$ 3,684.57	Sales for year	$217,387.42
Manufactured during year	195,104.97	Less returns	276.00
Total	$198,789.54	Net sales	$217,111.42
Deduct		Balance, loss, carried to profit-and-loss account	7,587.48
Finished goods on hand	9,386.00		
Cost of goods sold	$189,403.54		
Advertising	8,630.00		
Salesmen's salaries	8,930.00		
Commissions	7,642.00		
Discounts on sales	186.36		
Packing	2,017.00		
Rent of salesrooms	4,290.00		
Stable expenses	2,750.00		
Depreciation			
Horses, wagons, and harness	850.00		
	$224,698.90		$224,698.90

PROFIT-AND-LOSS ACCOUNT

Debits			Credits	
Loss from trading, as shown by trading account		$ 7,587.48	Balance, net loss carried to the debit of surplus account	$36,131.26
Discount lost		120.00		
General expense		5,230.00		
General insurance		750.00		
Interest on loans		440.00		
Light and heat, office		168.00		
Office salaries		9,700.00		
Postage and expressage		1,250.00		
Rent for office		4,875.00		
Superintendence, general		1,400.00		
Stationery and printing	$1,080.00			
Less inventory	300.00	780.00		
Taxes		250.00		
Depreciation of office furniture		100.00		
Furniture and fixtures		450.00		
Reserve for bad debts, 3 per cent. on accounts receivable		3,030.78		
		$36,131.26		$36,131.26

BALANCE SHEET

DECEMBER 31

CURRENT ASSETS		
Cash on hand	$ 1,825.00	
Cash in bank	26,467.00	$ 28,292.00
Notes receivable	$130,000.00	
Less notes under discount	8,000.00	
	$122,000.00	
Accounts receivable, per schedule	101,026.00	223,026.00
Raw material on hand	$ 16,250.00	
Finished goods on hand	9,386.00	25,636.00
PERSONAL PROPERTY		
Tools in factory	$ 2,600.00	
Less depreciation	600.00	$ 2,000.00
Furniture and fixtures	$ 1,950.00	
Less depreciation	450.00	1,500.00
Office furniture	$ 1,100.00	
Less depreciation	100.00	1,000.00
Stationery and supplies		300.00
FIXED ASSETS		
Horses, wagons, and harness		$ 8,500.00
Machinery and plant		12,350.00
Total tangible assets		$302,604.00
Good-will		10,000.00
		$312,604.00
CURRENT LIABILITIES		
Notes payable, per schedule	$19,500.00	
Accounts payable, per schedule	30,020.00	$ 49,520.00
Loans payable		22,000.00
RESERVE ACCOUNTS		
For depreciation	$ 3,236.98	
On horses, wagons, and harness, 10 per cent.	850.00	
On machinery and plant, 5 per cent.	617.50	$ 4,704.48
For bad debts	$ 5,727.00	
On accounts receivable, 3 per cent.	3,030.78	8,757.78
FIXED LIABILITIES		
Surplus	$63,753.00	
Less net loss	36,131.26	$ 27,621.74
Capital stock		200,000.00
		$312,604.00

16. **Question 18.**—A proposition has been made for the taking over of three corporations chartered by the state of Pennsylvania by a fourth corporation to be chartered by the same state. The following statement of affairs has been submitted by the three corporations proposed to be absorbed, and found to be correct:

CORPORATION NO. 1

Capital stock, per value of shares $25	$1,000,000.00
Treasury stock	100,000.00
Bonded indebtedness	500,000.00
Treasury bonds	50,000.00
Accounts payable	80,000.00
Bills payable	50,000.00
Cash	50,000.00
Accounts receivable	180,000.00
Bills receivable	42,000.00
Supplies	18,000.00
Plant and franchise	1,250,000.00

CORPORATION NO. 2

Capital stock, par value of shares $50	$1,000,000.00
Bonded indebtedness	500,000.00
Bills payable	10,000.00
Accounts payable	120,000.00
Cash	53,000.00
Accounts receivable	220,000.00
Bills receivable	80,000.00
Supplies	52,000.00
Plant and franchises	1,275,000.00

CORPORATION NO. 3

Capital stock, par value of shares $25	$1,000.00

The proposition made to the three corporations is as follows: Each corporation shall pay its own debts, and distribute among its own stockholders whatever amount shall appear to the credit of profit and loss in closing its books, treating the statements rendered as being correct as to values. The remaining assets are to be turned over to the promoters of the new corporation on the following terms: The capital stock of corporations Nos. 1 and 2 at 20 per cent. premium in cash, and $100,000 in cash to be paid for the capital stock of corporation No. 3. The bonds of the two corporations will be purchased at a premium of 5 per cent. The proposition was accepted. Give closing entries for the books of the old corporations. Organize the new corporation with a capital of $1,000, and increase to such an amount as may be deemed necessary, carrying the expenses of incorporation through cash, including $5,000 counsel fees. Provide for an issue of bonds sufficient to carry out this agreement, said bonds to be sold at 10 per cent. discount, and also provide for $150,000 bonds in treasury, and give a balance sheet of the new corporation after the organization.

17. Answer to Question 18.—This proposition is an excellent one for drawing out the candidate's ability in the analysis of intricate corporate adjustments. Many interesting facts are involved and some of them are hard to interpret. For instance, what debts are to be paid by each company is subject to conjecture, because there is not sufficient cash on hand in either of the companies to carry out the agreement. To meet this requirement it is assumed that enough of the accounts receivable have been collected to provide sufficient funds for settlement of current liabilities and for the distribution of surplus profits. If more of the accounts receivable had been realized upon there would be an equivalent amount of cash on hand to be turned over to the new company.

The bonded indebtedness of each of the first two companies is given as $500,000, but as Corporation No. 1 has unsold bonds of $50,000 it is assumed that only $450,000 has been sold. If the term indebtedness is interpreted to mean outstanding, then the amount must be increased to $500,000. On this basis, the purchase price at 105 will be $525,000, instead of $475,250, as shown in the solution.

The question says to reincorporate the new company for such an amount as may be deemed necessary, and to issue bonds sufficient to carry out this agreement. This is taken to mean the amount required after the increase of capital stock to provide the funds needed to complete the purchase of stocks and bonds contracted for, including treasury bonds, expenses, etc. To complete the incorporation of the company the capital stock is therefore increased from $1,000 to $2,000,000 and a bond issue provided for the same amount. The bonded debt might well have been increased, but the valuation of plant, which constitutes the security for bondholders, is not sufficient to justify.

Treasury Stock No. 1 has been taken as stock that had not been issued, thus leaving a capital outstanding of $900,000. Treasury bonds were treated in like manner, and interest accrued on same not considered.

18. It is assumed that the consolidation was brought about by promoters through whom the transfers of securities and

COMBINED STATEMENTS BEFORE AND AFTER LIQUIDATION

	Corporation No. 1		Corporation No. 2		Corporation No. 3	
	Total	Cleared	Total	Cleared	Total	Cleared
ASSETS						
Plant and franchise	$1,250,000.00	$1,250,000.00	$1,275,000.00	$1,275,000.00		
Supplies	18,000.00	18,000.00	52,000.00	52,000.00		
Cash	50,000.00		53,000.00			
Bills receivable	42,000.00	42,000.00	80,000.00	80,000.00		
Accounts receivable	180,000.00	40,000.00	220,000.00	93,000.00		
Deficit					$1,000.00	
Total	$1,540,000.00	$1,350,000.00	$1,680,000.00	$1,500,000.00	$1,000.00	
LIABILITIES						
Bonds payable	$ 450,000.00	$ 450,000.00	$ 500,000.00	$ 500,000.00		
Bills payable	50,000.00		10,000.00			
Accounts payable	80,000.00		120,000.00			
Capital stock	900,000.00	900,000.00	1,000,000.00	1,000,000.00	$1,000.00	$1,000.00
Surplus	60,000.00		50,000.00			
Total	$1,540,000.00	$1,350,000.00	$1,680,000.00	$1,500,000.00	$1,000.00	$1,000.00

assets would be made, and the adjusting entries have been made accordingly. Other methods of adjustment may be assumed as readily with similar results. Indeed, the promoters, by means of good-will, might have greatly increased the value of properties turned over to the new company. The bond discount of the three companies has been charged to the separate franchise accounts in proportion to cost, but it would not be wrong to open a separate account for bond discount. In the combined statements of the three companies, the cleared column of each company shows the status of the accounts turned over to the promoters of the new company, the stock at 120, and the bonds at 105. All outstanding debts have been paid, as agreed on, but to do so part of the accounts receivable had to be collected to provide sufficient cash as before explained. If more had been realized from accounts receivable, the cleared columns would show cash on hand and an equivalent reduction in accounts receivable. Bonds outstanding of Company No. 1 are taken as $450,000, on the presumption that the amount authorized is $500,000. It will be seen that Company No. 3 has no assets listed, and that the surplus of Company No. 1 and Company No. 2 had been paid to stockholders.

BOOKS OF CORPORATION NO. 1

Summary

The cash paid by the promoters did not go through the books of the liquidating companies but to the individual holders of the stocks and bonds in proportion to their holdings. The amounts to be divided are as follows:

Paid by promoters	
Purchase of bonds	$ 450,000.00
Premium on bonds	22,500.00
Purchase of stock	900,000.00
Premium on stock	180,000.00
Total investment	$1,552,500.00

Cash Account

Balance	$ 50,000.00	Bills payable	$ 50,000.00
Accounts receivable	140,000.00	Accounts payable	80,000.00
		Surplus dividend to stockholders	60,000.000
	$190,000.00		$190,000.00

ADJUSTING ENTRIES

Promoters of new company	$1,350,000.00	
Sundry assets		$1,350,000.00
Plant and franchise	1,250,000.00	
Supplies	18,000.00	
Bills receivable	42,000.00	
Accounts receivable	40,000.00	
Capital stock	$ 900,000.00	
Bonded indebtedness	450,000.00	
Promoters of new company		$1,350,000.00

For assets turned over to promoters of new company, per agreement, for capital stock canceled and taken, and for assumption of bonded indebtedness.

Capital stock	$100,000.00	
Treasury stock		$100,000.00
Bond account	50,000.00	
Treasury bonds		50,000.00

BOOKS OF CORPORATION NO. 2

SUMMARY OF ADJUSTMENTS

The cash paid by promotors did not go through the books but to the holders of the securities and treated as in No. 1, and as follows:

Cost to promoters	
Purchase of bonds	$ 500,000.00
Premiums on bonds	25,000.00
Purchase of stock	1,000,000.00
Premium on stock	200,000.00
Total investment	$1,725,000.00

CASH ACCOUNT

Balance	$ 53,000.00	Bills payable	$ 10,000.00
Accounts receivable	127,000.00	Accounts payable	120,000.00
		Surplus, dividend to stockholders	50,000.00
	$180,000.00		$180,000.00

ADJUSTING ENTRIES

Promoters of new company	$1,500,000.00	
Sundry assets		$1,500,000.00
Plant and franchise	1,275,000.00	
Supplies	52,000.00	
Bills receivable	80,000.00	
Accounts receivable	93,000.00	
Capital stock	$1,000,000.00	
Bonded indebtedness	500,000.00	
Promoters of new company		$1,500,000.00

For assets turned over per agreement, and for assumption of capital and bonded indebtedness, both stocks and bonds having been purchased by said promoters from the holders thereof.

BOOKS OF CORPORATION NO. 3

Evidently no books have been opened and no doubt the company has recently been incorporated. There is a capital stock of $1,000 but no assets listed. The promoters paid $100,000 to the stockholders for this stock.

Adjusting Entries

Promoters of new company	$1,000.00	
Deficit, or assets withheld		$1,000.00
Capital stock	$1,000.00	
Promoters of new company		$1,000.00
For capital stock transferred as per agreement.		

Summary of Investment

Amount paid by promoters to three corporations by which the entire ownership therein is acquired:

Cash Investment

Capital stock of Corporation No. 1	$ 900,000.00	
Premium of 20 per cent.	180,000.00	$1,080,000.00
Capital stock in Corporation No. 2	$1,000,000.00	
Premium of 20 per cent.	200,000.00	1,200,000.00
Bonds of Corporation No. 1	$ 450,000.00	
Premium of 5 per cent.	22,500.00	472,500.00
Bonds of Corporation No. 2	$ 500,000.00	
Premium of 5 per cent.	25,000.00	525,000.00
Capital stock of Corporation No. 3	$ 1,000.00	
Premium or bonus	99,000.00	100,000.00
Total investment		$3,377,500.00

It will be noticed that premiums on stocks and bonds and the stock of No. 3 amount in all to $527,500. This may be entered in the books of the new company as good-will, or franchise.

19. This purchase forms a basis on which to incorporate the new company, and may be handed over by the promoters at the price paid, or at an increased valuation. The books of the new company are as follows:

BOOKS OF CORPORATION NO. 4

Opening Data

The company is to incorporate for $1,000, and then increase its capital to the amount deemed advisable. The entire amount paid for the stocks and bonds of the three companies is $3,377,500. To pay for this, the company is to sell its increased capital stock, also the bond issue that is to be floated and sold at 90. The bond issue must be for $150,000, more than required for sale, thus providing the treasury bonds called for. It is decided to increase the capital stock to $2,000,000 and provide a bond issue for $2,000,000 also. The bonds are sold at 90 per cent. of face value. Assume that all of the capital stock but $199,000 has been sold at par and fully paid for.

OPENING JOURNAL ENTRIES

Subscribers		$1,000.00	
Capital stock			$1,000.00
For incorporation of company and subscription to capital stock.			
Subscribers		$1,800,000.00	
Unsubscribed stock		199,000.00	
Capital stock			$1,999,000.00
Increase of capital stock from $1,000 to $2,000,000			
Capital authorized		$2,000,000.00	
Subscribed for and paid up		1,801,000.00	
Unsubscribed		$ 199,000.00	
Treasury bonds		$2,000,000.00	
Bonds payable			$2,000,000.00
Bonds authorized	$2,000,000.00		
Bond sales	1,850,000.00		
Treasury bonds on hand	$ 150,000.00		

Bonds were sold at a discount of 10 per cent. as per cash book.

CASH ACCOUNT

Subscribers	$ 1,000.00	Incorporation expenses, fee one-third on $2,000,000	$ 6,666.67
Subscribers	1,800,000.00	Charter fee	30.00
Treasury bonds (Discount contra)	1,850,000.00	Counsel fees	5,000.00
		Other expenses, say	2,000.00
		Bonds discount, 10 per cent. of sale	185,000.00
		Promoters of company for value of plants, franchises, and assets of Corporations Nos. 1, 2, and 3	3,377,500.00
		Total payments	$3,576,196.67
		(See accompanying journal entries)	
		Balance	74,803.33
	$3,651,000.00		$3,651,000.00
Balance	$ 74,803.33		

OPENING JOURNAL ENTRIES—(*Continued*)

Plant and franchise No. 1	$1,537,536.91	
Plant and franchise No. 2	1,594,485.66	
Franchise No. 3	105,477.43	
Bills receivable	122,000.00	
Accounts receivable	133,000.00	
Supplies	70,000.00	
Promoters new company		$3,377,500.00
Bond discount		185,000.00

For assets turned over by the promoters of the company, including the amount added for premium, etc. Values per attached statement headed, Details of Property Received.

INVENTORY VALUATIONS

Plant and franchise Corporation No. 1		
Original valuation	$1,250,000.00	
Premium on stock purchase	180,000.00	
Premium on bond purchase	22,500.00	
Share of bond discount, prorated to cost of entire plant, etc.	85,036.91	$1,537,536.91
Plant and franchise Corporation No. 2		
Original valuation	$1,275,000.00	
Premium on stock purchase	200,000.00	
Premium on bond purchase	25,000.00	
Share of bond discount	94,485.66	1,594,485.66
Franchise Corporation No. 3		
Original cost	$ 100,000.00	
Share of bond discount	5,477.43	105,477.43
Bills receivable, Company No. 1	$ 42,000.00	
Bills receivable, Company No. 2	80,000.00	122,000.00
Accounts receivable, Company No. 1	$ 40,000.00	
Accounts receivable, Company No. 2	93,000.00	133,000.00
Supplies from Company No. 1	$ 18,000.00	
Supplies from Company No. 2	52,000.00	70,000.00
Total valuation		$3,562,500.00

The bond discount is prorated to the three companies in proportion to cost.

STATEMENT OF ASSETS AND LIABILITIES

ASSETS

Plant and franchise No. 1	$1,537,536.91
Plant and franchise No. 2	1,594,485.66
Franchise No. 3	105,477.43
Supplies	70,000.00
Bills receivable	122,000.00
Accounts receivable	133,000.00
Treasury bonds	150,000.00
Incorporation expenses	13,696.67
Cash	74,803.33
	$3,801,000.00

LIABILITIES

Capital stock authorized	$2,000,000.00	
Unsubscribed	199,000.00	
Outstanding		$1,801,000.00
Bond issue		2,000,000.00
		$3,801,000.00

20. Question 19.—The following question has been selected as an interesting study in analysis rather than as a problem in accountancy. Redraft the following statements if they are incorrect; interest on capital is at 5 per cent. per annum.

PROFIT-AND-LOSS ACCOUNT
FOR 6 MONTHS ENDED DECEMBER 31, 1914

Debits		Credits	
Purchases	$27,000.00	Sales	$40,025.00
Stock, December 31, 1914	5,000.00	Interest on capital	500.00
Partners' drawings	2,500.00	Stock, July 1, 1914	8,250.00
Rent	500.00	Commissions	1,500.00
Salaries	1,500.00		
Wages	4,750.00		
General expenses	900.00		
Interest on loan	125.00		
Balance, net profit	8,000.00		
	$50,275.00		$50,275.00

BALANCE SHEET
DECEMBER 31, 1914

Debits		Credits	
Creditors	$ 5,400.00	Debtors	$10,200.00
Bills receivable	3,200.00	Cash on hand	700.00
Partners' accounts, July 1, 1914	10,000.00	Cash in bank	4,000.00
Net profit	8,000.00	Loan from bank	5,000.00
		Stock, December 31, 1914	5,000.00
		Bills payable	1,700.00
	$26,600.00		$26,600.00

21. Answer to Question 19.

REDRAFTED BALANCE SHEET
DECEMBER 31, 1914

Assets		Liabilities		
Cash on hand	$ 700.00	Accounts payable		$ 5,400.00
Cash in bank	4,000.00	Loan from bank		5,000.00
Bills receivable	3,200.00	Bills payable		1,700.00
Accounts receivable	10,200.00	Total liabilities		$12,100.00
Stock on hand	5,000.00	Capital accounts		
		Investment	$10,000.00	
		Less drawings	2,500.00	
			$ 7,500.00	
		Add		
		Interest	250.00	
		Net gain	3,250.00	
		Present capital		11,000.00
	$23,100.00			$23,100.00

REDRAFTED PROFIT-AND-LOSS ACCOUNT
DECEMBER 31, 1914

Debits		Credits	
Inventory, July 1, 1914	$ 8,250.00	Sales	$40,025.00
Purchases	27,000.00		
Wages	4,750.00		
	$40,000.00		
Deduct			
Inventory, December 31, 1914	5,000.00		
Cost of sales	$35,000.00		
Gross gain, carried down	5,025.00		
	$40,025.00		$40,025.00
Rent	$ 500.00	Gross gain	$ 5,025.00
Salaries	1,500.00	Commissions	1,500.00
General expenses	900.00		
Interest on loan	125.00		
Total charges	$ 3,025.00		
Interest on capital	250.00		
Net gain	3,250.00		
	$ 6,525.00		$ 6,525.00

22. This question is not difficult, but it contains some points of interest and should be carefully studied as the items are mixed up more than one would expect to find in statements. The fact that both of them balance by an apparent net profit of $8,000 may lead one to suppose that this had something to do with the final result, but it has not. The business has been running for 6 months. Interest on capital for 6 months amounts to $250 instead of $500, as shown in the statement. From the figures a statement of assets and liabilities can be easily compiled, the balance of which gives the present capital of the firm, $11,000. It will be noted that the investments were $10,000, while the withdrawals were $2,500, leaving a net investment of $7,500. To this amount should be added interest on original investment, $250, giving a total of $7,750. The difference between this amount and the capital $11,000, is the net profit for the period, or $3,250. If interest on capital is considered a profit, the net gain is $3,500. In solving the problem the first step is to determine the net capital, and then the net gain, after which the matter of preparing the profit-and-loss statement is very simple. Commissions amounting to $1,500

are evidently earned, though there is nothing in the question to signify this conclusion other than by the balance obtained. It is necessary, however, to secure a net gain of $3,250, to get which amount the items of the statement must be arranged in such a way as to produce the required result. No accrued interest or depreciation has been considered, but it would be prudent to provide for such.

23. **Question 20.**—The following is the trial balance of the Rollins Manufacturing Company at December 31, 1912:

Cash in bank and on hand	$ 1,200.00	
Accounts receivable	17,000.00	
Accounts payable		$ 10,200.00
Plant and machinery	15,000.00	
Capital stock		25,000.00
Inventory account, materials	5,000.00	
Purchases, materials	50,000.00	
Sales		100,000.00
Wages, foreman and general	6,000.00	
Rent, taxes, power, and light	2,500.00	
Travelers' salaries and expenses	7,500.00	
Management, office salaries and expenses	5,000.00	
Manufacturing wages	20,000.00	
Duty and freight	6,000.00	
	$135,200.00	$135,200.00

Inventory of materials December 31, 1912, $11,500; depreciation of plant and machinery, 10 per cent.

When a profit-and-loss account is submitted to it, the company claims that there must be some mistake because their operations are so simple that they are able to estimate closely what the result should be; and the profit shown is about one-half their estimate. Their practice in pricing goods is to add 10 per cent. for factory expense to the cost of labor and material and then add 40 per cent. to cover selling, management, and profit. The factory foreman keeps a record for his own satisfaction of the quantities and value of all materials used and his figures, $44,000, are correct. Prepare a profit-and-loss account, and reconcile it with the estimated profits anticipated by the management.

24. **Answer to Question 20.**—The actual results of this problem can be easily obtained as exhibited in the accompanying

profit-and-loss statement which shows a net profit of $8,000. In order to reconcile the actual results with those estimated by the management, certain assumptions have to be made as indicated in the accompanying comments. It is not at all unusual for assumptions of this kind to be made in a manufacturing establishment, and the foreman or superintendent after years of experience is enabled to estimate very closely the proportions of materials, labor, and manufacturing expenses. Indeed, after a few years of careful record keeping, the wide-awake foreman should be able to make estimates that will not fluctuate to any great extent from actual operating results. In the present case, however, he erred by omitting freight and duty from the cost of materials and by underestimating the factory expenses. If the freight and duty are omitted from the cost of material, his estimate of material used is about correct; the problem states that the $44,000 of material used is correct, but it is found that this fluctuates from the actual figures taken on the same basis by $500.

It is stated that 40 per cent. is added to the cost of production to cover selling and general expenses and profits; but as the proportions are not stated it is impossible to determine how much of this is estimated for expenses and how much for profit. In order to establish a basis on which to work, it will be assumed that the expenses in each case amount to $12,500; on this basis there is an estimated profit of $15,660 or $7,660 in excess of the actual net profit. To reconcile this amount with the actual results, it is necessary to deduct the gain of $1,440 obtained from the estimated amount of sales from the $9,100 of underestimate in prime cost and factory expenses.

25. An examination of the accompanying exhibits will make the matter much clearer; these exhibits consist of material account, statement based on estimates, reconciliation of profits, manufacturing and profit-and-loss statement, and reconciliation statement. In cases of this kind where the accountant is called upon to make an examination, his written report follows as a natural sequence; therefore, in order to make this solution complete a written report should be included.

MATERIAL ACCOUNT

Inventory, January 1, 1912	$ 5,000.00	
Purchases during year	50,000.00	$55,000.00
Deduct		
Material used during year	$44,000.00	
Inventory, December 31, 1912	11,500.00	55,500.00
Increase in material		$ 500.00

The foregoing presumes that freight and duty have not been considered in material costs. The correct condition of the material account should be as follows:

MATERIAL ACCOUNT

Inventory, January 1, 1912	$ 5,000.00	
Purchases	50,000.00	
Freight and duty inbound	6,000.00	$61,000.00
Deduct		
Material used	$44,000.00	
Material on hand	11,500.00	55,500.00
Shortage of material		$ 5,500.00

A comparison of these two material accounts makes it evident that the freight and duty have not been considered in the foreman's estimate of $44,000 of material used.

STATEMENT
BASED ON ESTIMATES OF MANAGEMENT

Cost of material used	$ 44,000.00
Manufacturing wages	20,000.00
Prime cost	$ 64,000.00
Add 10 per cent. for factory expenses	6,400.00
Total manufacturing cost	$ 70,400.00
Add 40 per cent. for selling, management, and profits	28,160.00
Estimated selling price	$ 98,560.00
Actual amount of sales	100,000.00
Excess of sales over estimate	$ 1,440.00

26. It is seen that the actual sales exceed the estimate by $1,440, and it seems as if their plan of estimating had been used more as a means of establishing a selling price than anything else. The ratio of profits is not stated but is included in the 40 per cent. added to the manufacturing costs; this amounts to $28,160, including selling expenses, management expenses, and profits. What portion of it is profit? The correct statement shows that selling and general expenses amount to $12,500; deducting this from the $28,160 gives $15,660, which might be considered the estimated profit. As the company claims

RECONCILING PROFITS

Estimated Profits Harmonized With Actual Profits

Profits estimated by management			$15,660.00
Actual profits are			8,000.00
Excess of estimate over actual			$ 7,660.00
Analysis of charges			
Items underestimated			
Actual manufacturing expenses		$10,000.00	
Estimated manufacturing expenses		6,400.00	
Amount under estimate		$ 3,600.00	
Add freight and duty omitted		6,000.00	
Excess of actual manufacturing expenses over the estimated		$ 9,600.00	
Deduct			
Profits not estimated			
Excess of sales over amount estimated	$1,440.00		
Increase in material account	500.00	1,940.00	
Amount to be deducted from estimated profits			$ 7,660.00

MANUFACTURING AND PROFIT-AND-LOSS STATEMENTS

Rollins Manufacturing Company, December 31, 1912

Costs			Sales	
Materials on hand, January 1, 1912	$ 5,000.00		Sale of goods for year	$100,000.00
Purchases for year	50,000.00			
Freight and duty inbound	6,000.00	$ 61,000.00		
Less materials on hand December 31, 1912	$11,500.00			
Cost of materials used		$ 49,500.00		
Manufacturing wages		20,000.00		
Prime cost		$ 69,500.00		
Wages, foreman, etc.	$6,000.00			
Rent, taxes, power, etc.	2,500.00			
Depreciation, plant and machinery	1,500.00	10,000.00		
Cost of goods sold		$ 79,500.00		
Gross profit carried down		20,500.00		
		$100,000.00		$100,000.00
Travelers' salaries and expenses	$7,500.00		Gross profit brought down	$ 20,500.00
Office salaries and expenses	5,000.00	$ 12,500.00		
Net profit		8,000.00		
		$ 20,500.00		$ 20,500.00

RECONCILIATION STATEMENT

Comparison of Actual and Estimated Results For Fiscal Year Ended December 31, 1912

Items	Actual			Estimated		Compared With Actual	
						Under	Gain
Sales			$100,000.00		$98,560.00		$1,440.00
Inventory, January 1, 1912	$ 5,000.00						
Purchases	50,000.00						
Freight and duty	6,000.00	$61,000.00					
Less inventory, December 31		11,500.00					
Material used		49,500.00		$44,000.00			
Manufacturing wages		20,000.00		20,000.00			
Prime cost		69,500.00		64,000.00		$5,500.00	
Wages, foreman and general	6,000.00						
Rent, taxes, etc.	2,500.00						
Depreciation	1,500.00						
Factory expenses		10,000.00		6,400.00		3,600.00	
Cost of sales			79,500.00		$70,400.00		
Gross profit			20,500.00		28,160.00		
Traveling expenses and salaries	7,500.00						
Office expenses and salaries	5,000.00						
Administration and selling expenses			12,500.00		12,500.00		
Net profit			8,000.00		15,660.00		
Excess of estimated profits over actual					7,660.00		7,660.00
True net profit			8,000.00		8,000.00	9,100.00	9,100.00

that the estimated profit is about twice the $8,000 shown by the statement, take this $15,660 as the profit and use it as a basis for reconciling the two statements.

The excess of estimated profits amounting to $7,660 is accounted for by omission of freight and underestimating the manufacturing expenses; on the other hand there is an unexpected profit on sales of $1,440 over the amount estimated and also an increase in the value of material. Perhaps this item of $500 came about by an improper valuation of inventories.

The sales are $1,440 over the amount estimated. The prime cost is $5,500 and factory expenses, $3,600 under the actual.

27. Question 21.—Messrs. Smith & Jones, architects, want statements showing the financial condition of their firm, their relative positions as partners, their business profit, and their income for the year. Their agreement provides that Smith is to receive two-fifths and Jones three-fifths of the profits; the agreement is silent on the subject of interest charges on capital and drawings. On December 31, 1912, the trial balance is as follows; the index letters refer to the notes made on examining the books:

a Petty cash account	$ 1,150.50	
b Bank of Hamilton	675.80	
c Office fixtures	540.00	
d Jones' house account	8,240.40	
e Stocks account	10,150.50	
f Expense account	4,792.80	
Client's accounts:		
g Ungava Bank	150.00	
h Imperial Deposit Company	250.00	
i Swansea Church	95.00	
k Civic abbatoir	5.00	
		$ 500.00
l Masonic hall	$ 500.00	
m Office Building Company	1,000.00	
n City fire hall	700.00	
o Manor house	350.00	
p X estate	9,550.00	
		12,100.00
Smith, drawings account	6,000.00	
Jones, drawings account	4,800.00	
q Smith, capital account		10,000.00
r Jones, capital account		8,000.00
s Miscellaneous fees account		950.00
t Smith, loan account		5,800.00
	$36,850.00	$36,850.00

(*a*) The petty cash book shows the balance in hand at December 31, 1912, to have been $49.50; an analysis of the payments shows $100 to have been advanced to Smith and $5 paid for Jones; the balance can be charged to general business expenses.

(*b*) This is current account after crediting the proceeds of a client's note discounted but not matured, $2,000.

(*c*) 7½ per cent. is to be written off.

(*d*) The payments on account of Mr. Jones' house have been made through the firm's bank and have been kept separate from his drawing account for the purpose of showing him the cost of the house.

(*e*) The balance at January 1, 1912, was $12,500, further purchase of shares during the year $5,100, proceeds of sales $6,500, and interest and dividends received $949.50. The market value of the firm's holdings December 31, 1912, was $10,050, and the books are to be adjusted to that value.

(*f*) Expenses account covers rent paid $1,100, $100 being outstanding, salaries of staff $2,812, and general expenses $880.80.

(*g*) This is a charge made in the previous year for plans; the charge stated that it is recoverable.

(*h*) A charge made in the previous year; irrecoverable.

(*i*) Allowance to be made.

(*k*) Result of an error in submitting account; recoverable.

(*l*), (*m*), (*n*), (*o*), (*p*) These are amounts received during the year. The total charge against these clients to date, as per charges memorandum book, not posted to clients' accounts, is $14,600; namely, (*l*) $625, (*m*) $1,200, (*n*) $750, (*o*) $900, and (*p*) $11,125.

(*q*) and (*r*) These were balances as per balance sheet, December 31, 1911.

(*s*) The amount shown is that of miscellaneous fees received during the year; in addition there is $175 outstanding.

(*t*) An advance by Mr. Smith to the firm, made July 1, 1912, $7,000, less $1,200, repaid September 30, 1912, to bear interest at 6 per cent. per annum, calculated quarterly; no interest has yet been credited or paid.

28. Answer to Question 21.—It will be seen that this question relates to a firm that sells its services to clients; the account keeping must necessarily be different from that of trading or manufacturing concerns. The accountant is asked to make a statement showing the firm's financial position as of December 31, 1912; this of course has reference to the balance sheet. He is required also to make statements showing the relative positions of the partners, the business profit, and the income for the year. The business profit or the business earnings has reference to the amount earned from professional services; in other words, the aggregate sales of the men's skill for the period under review. From this must be deducted the direct charges and expenses necessary for conducting the business such as rent, salaries, etc. The gross earnings then minus these direct expenses must give the business profit, or net earnings from business activities. Of course, apart from this they may, and in this case do, have other sources of income as well as other expenses, which must also be taken into consideration in determining the firm's net income for the year. In the statement of income and expenses shown herewith the division, however, may be changed slightly.

29. The trial balance of this firm when the accountant began the examination is shown in the question. A close inspection of the various accounts and items, however, discloses that several adjustments were necessary in order to have each account exhibit its correct status. Therefore, the various index letters were made by the accountant in making an explanation of the various items requiring adjustments in their respective accounts. This plan of keying notation and necessary adjustments is followed by most professional accountants as it enables them to make on separate sheets full explanations of necessary changes. It enables them also to note any other features of interest to them in making adjustments and afterwards in making up exhibits and schedules.

The statement of earnings and expenses shown is of special interest because it shows, in separate divisions, the professional earnings and expenses incident thereto, as well as the other

income and outlays relating to the firm's business. It shows that the aggregate income of the firm consists of $15,725 from professional services and $949.50 from investments, making an aggregate income of $16,674.50. The net business earnings amounted to $9,836.20, but this will be reduced slightly if depreciation on furniture and interest on loans are entered as a direct expense. It will be noticed that these two items have been placed in the second section, but there is no great objection to their being placed in the first. The interest on money borrowed was not a necessary business expenditure because that was caused by the heavy withdrawals of the partners. It would seem only fair to charge interest on the withdrawals, and especially on the heavy payments for the account of Jones, but as the agreement is silent in this respect that does not seem necessary.

The investment in stocks produced an income of $949.50, but there is a loss by reason of shrinkage in value of $1,050, so that this particular investment has really netted a loss of $100.50. The Imperial Deposit Company account of $250 is an old account and should not affect the business earnings of this year. The accountant is advised to make an allowance from the Swansea Church account; he has, therefore, deducted $15 for this purpose, though a larger amount might be advisable. The firm's net income or net profit for the year then is $9,238.20, as exhibited by the statement.

30. The question calls for a balance sheet and the partners' accounts, both of which are shown herewith. The interest due Smith on his loan of $5,800 now amounts to $192, and has been credited to his account, though it might not be wrong to credit it to interest payable. The house account of Jones amounting to $8,240.40 has been charged against his account in the exhibits, though it would not be wrong to show it among the assets of the balance sheet; it does seem, however, that the question itself requires that this shall be deducted from his account in order to show his actual interest in the firm. Of course in a case of embarrassment the private property of the partners will be liable for the debts of the firm.

The allowance of $15 of the Swansea Church account has been credited directly to the account, though it would not be wrong to open a reserve for allowance or for bad debts. There is a contingent liability of $2,000, as shown under (*b*) and as noted on the balance sheet. The question states that it was discounted at the bank, but as there is no account for discount perhaps the amount allowed was charged to expense. The adjustment of petty cash account is interesting, as it shows the careless way in which the petty cash book was maintained.

TRIAL BALANCE, AFTER ADJUSTMENT

DECEMBER 31, 1912

Petty cash account	$ 49.50	
Bank at Hamilton	675.80	
Office fixtures	499.50	
Jones' house account	8,240.40	
Stocks account	10,050.00	
Income from stocks		$ 949.50
Expense	5,888.80	
Ungava Bank	150.00	
Imperial Deposit Company		
Swansea Church	80.00	
Civic abbatoir	5.00	
Masonic hall	125.00	
Office Building Company	200.00	
City fire hall	50.00	
Manor house	550.00	
X estate	1,575.00	
Service earnings		14,600.00
Rent owing		100.00
Smith drawings	6,100.00	192.00
Jones drawings	4,805.00	
Smith capital		10,000.00
Jones capital		8,000.00
Miscellaneous fees		1,125.00
Miscellaneous clients	175.00	
Smith loan account		5,800.00
Interest	192.00	
Profit and loss	1,355.50	
	$40,766.50	$40,766.50

And yet this is not strange, for professional men do not pretend to be bookkeepers and are more concerned in the professional activities than in account keeping.

The accompanying journal entries show the various adjustments necessary to bring the accounts in harmony with the findings of the accountant. There might be some other divisions

made in the preparation of accounts, but the splitting of hairs is hardly worth while. The trial balance of the ledger

ADJUSTING JOURNAL ENTRIES

DECEMBER 31, 1912

Smith drawing		$ 100.00	
Jones drawing		5.00	
Petty cash			$ 105.00
For advances made and not recorded.			
Expense		996.00	
Petty cash			996.00
For balance of petty-cash account closed into general expense.			
Profit and loss		40.50	
Office fixtures			40.50
For 7½-per-cent. depreciation on $540.			
Profit and loss		1,050.00	
Stock account			1,050.00
Shrinkage in value of stocks both those sold and on hand			
Expense		100.00	
Rent owing			100.00
Amount owing at end of year.			
Profit and loss for last year		250.00	
Profit and loss		15.00	
Imperial Deposit Company			250.00
Swansea Church			15.00
Account of Imperial Deposit Company irrecoverable, and allowance on church account.			
Clients		14,600.00	
Service earnings			14,600.00
For charges against clients to date, per memorandum book not yet posted, as follows:			
Masonic Hall	$ 625.00		
Office Building Company	1,200.00		
City Fire Hall	750.00		
Manor House	900.00		
X estate	11,125.00		
Total	$14,600.00		
Miscellaneous accounts		175.00	
Miscellaneous fees accounts			175.00
For miscellaneous contracts completed and not yet entered or paid.			
Interest		192.00	
Smith, drawing			192.00
For 6-per-cent. interest on loan to firm as follows:			
$5,800 for 6 months,	$174.00		
1,200 for 3 months,	18.00		
$7,000 total	$192.00		

after adjustment is shown herewith also. The ledger accounts are included as well, in order to show their status after the

various entries were posted. The accounts have not been closed, as this could be easily done by setting up the journal entries

STATEMENT OF EARNINGS AND EXPENSES
SMITH & JONES, ARCHITECTS
FOR YEAR ENDED DECEMBER 31, 1912

Expenses		Earnings	
Rent of office	$ 1,200.00	From professional services rendered	$14,600.00
Salaries	2,812.00	Miscellaneous fees for services, paid	950.00
General expenses	880.80	Miscellaneous fees for services, outstanding	175.00
General expenses per petty-cash adjustment	996.00		
Total	$ 5,888.80		
Business earnings	9,836.20		
	$15,725.00		$15,725.00
Other outlays		Net earnings for year brought down	$ 9,836.20
Loss on adjustment of stocks to market value	$ 1,050.00	Other income	
Depreciation of office furniture	40.50	Interest and dividends on stocks	949.50
Bad debts written off	250.00		
Allowance for client	15.00		
Interest on loan	192.00		
Total	$1,547.50		
Net income, profit	9,238.20		
	$10,785.70		$10,785.70

Total income for the year is $16,674.50.

APPORTIONMENT OF INCOME.—Smith, two-fifths, $3,695.28; Jones, three-fifths, $5,542.92.

BALANCE SHEET
SMITH & JONES, ARCHITECTS
AS OF DECEMBER 31, 1912
ASSETS

Current assets		
Petty cash	$ 49.50	
Balance in bank	675.80	$ 725.30
Clients' account, due	$ 235.00	
Miscellaneous fees, due	175.00	
Current accounts with clients	2,500.00	2,910.00
Total		$ 3,635.30
Investments		
Stock owned		10,050.00
Fixed assets		
Office fixtures		499.50
		$14,184.80

LIABILITIES AND CAPITAL

Current liabilities		
Rent owing		$ 100.00
Fixes liabilities		
Loan from Smith		5,800.00
Total		$ 5,900.00
Partners' accounts		
Smith's capital	$7,787.28	
Jones' capital	497.52	
Net worth of firm		8,284.80
		$14,184.80

NOTE.—Under discount at bank a client's note for $2,000 on which this firm is contingently liable.

and posting them accordingly. Even in closing it might be advisable to leave Jones' house account stand separately. The capital account should be left intact and all drawings of the profits should be placed in the drawings account.

ACCOUNTS WITH PARTNERS
DECEMBER 31, 1912

SMITH'S ACCOUNT

Investment in the business	$10,000.00		
Share of profits, two-fifths	3,695.28		
Interest on loan	192.00	$13,887.28	
Deduct			
Cash drawings for year		6,100.00	
Smith's net worth		$ 7,787.28	$7,787.28

JONES' ACCOUNT

Investment in the business	$8,000.00		
Share of profits, three-fifths	5,542.92	13,542.92	
Deduct			
Cash drawings for year	$4,805.00		
Cash advanced to purchase house	8,240.40	13,045.40	
Jones' net worth			497.52
Net worth of firm this date			$8,284.80

There would not be any serious objection to carrying Jones' house account among the assets instead of charging same to his account; in order to show the relative positions of the partners, however, it seems necessary to enter it as a withdrawal of funds that is chargeable to him. This indicates, of course, that the house is to be the property of Jones and not an asset of the partnership. This charge practically wipes out Jones' investment; whether or not he is to replace it is not a part of the problem.

LEDGER ACCOUNTS WITH ADJUSTMENTS

Petty-Cash Account

Amount given	$1,150.50	Advance to Smith	$ 100.00
		Paid for Jones	5.00
		General business expenses	996.00
		Balance	49.50
	$1,150.50		$1,150.50
Balance	$ 49.50		

Bank of Hamilton

Balance	$675.80		

Office Fixtures

Cash	$540.00	Depreciation	$40.50

Jones' House Account

Cash	$8,240.40		

Stocks Account

Balance, January 1,1912	$12,500.00	Cash sales	$ 6,500.00
Cash	5,100.00	Loss, shrinkage	1.050.00
		Market value of stock	10,050.00
	$17,600.00		$17,600.00
Value of stock	$10,050.00		

Income From Stock Investments

		Cash	$949.50

Expense

Rent paid	$1,000.00		
Rent owing	100.00		
Salaries	2,812.00		
Petty cash adjustment	996.00		
General expenses	880.80		

UNGAVA BANK

Balance	$250.00	Profit and loss	$250.00

SWANSEA CHURCH

Balance	$95.00	Profit and loss	$15.00

CIVIC ABBATOIR

Balance	$5.00		

MASONIC HALL

Services	$625.00	Cash	$500.00

OFFICE BUILDING COMPANY

Services	$1,200.00	Cash	$1,000.00

CITY FIRE HALL

Services	$750.00	Cash	$700.00

MANOR HOUSE

Services	$900.00	Cash	$350.00

X ESTATE

Services	$11,125.00	Cash	$9,550.00

Service Earnings

		Sundry clients	$14,600.00

Rent Owing

		Owing end of year	$100.00

Smith Drawings

Cash	$6,000.00	Interest on loan	$192.00
Cash	100.00		

Jones Drawings

Cash	$4,800.00		
Cash	5.00		

Smith Capital

		Balance	$10,000.00

Jones Capital

		Balance	$8,000.00

Miscellaneous Fees Account

		Cash	$950.00
		Not yet paid	175.00

Smith Loan Account

Cash	$1,200.00	Cash	$7,000.00

MISCELLANEOUS CLIENTS

Services rendered	$175.00	

INTEREST

On loan to Smith	$192.00	

PROFIT AND LOSS

Depreciation on office fixtures	$ 40.50	
Stock account	1,050.00	
Bad debts, old	250.00	
Allowance	15.00	

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NOTE.—In this Volume, each Section is complete in itself and has a number. This number is printed at the top of every page of the Section in the headline opposite the page number, and to distinguish the Section number from the page number, the Section number is preceded by a section mark (§). In order to find a reference, glance along the inside edges of the headlines until the desired Section is found, then along the page numbers of that Section until the desired page is found. Thus, to find the reference "Accounting, Municipal, §39, p1," turn to the Section marked §39, then to page 1 of that Section.

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